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DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION AND THE IMPLICATIONS OF FEES ON IMPORTED OIL

HEARING

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON THE

DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION AND THE IMPLICATIONS OF FEES ON IMPORTED OIL

SEPTEMBER 18, 1986

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DOMESTIC AND INTERNATIONAL PETROLEUM SITUATION AND THE IMPLICATIONS OF FEES ON IMPORTED OIL

THURSDAY, SEPTEMBER 18, 1986

U.S. Senate,
Committee on Energy and Natural Resources,
Washington, DC.

The committee met, pursuant to notice, at 9:40 a.m., in room SD-366, Dirksen Senate Office Building, Hon. James A. McClure (chairman) presiding.

Present: Senators McClure, Warner, Nickles, Bumpers, Ford, and Bingaman.

Also present: Richard D. Grundy, director of oversight and investigations; and Elizabeth Moler, counsel for the minority.

OPENING STATEMENT OF HON. JAMES A. McCLURE, A U.S. SENATOR FROM THE STATE OF IDAHO

The Chairman. Good morning.

It seems to me that this hearing is important enough for us to conduct it as originally scheduled, without disrespect to our guest of State, who will be addressing a joint session of Congress. I know that if we try to delay or reschedule, we will find it almost impossible to reschedule this hearing; in my judgment, it is far too important to simply forego for the ceremonial aspects of foreign visitors.

Six months ago, this committee held oversight hearings on the international oil situation because of our concern for the precipitous decline in international oil prices.

At that time, I observed, and I quote: "The greatest uncertainty is not whether the price will collapse further, but when." And that certainly occurred.

Without question, our domestic economy has benefited as consumers have embraced reduced oil prices. However, the long-term consequences of low oil prices are an increased dependence on foreign oil, a permanent loss of domestic production, and greater power for the few remaining survivors, with OPEC at the helm. These obviously represent risks to our national security.

A recent IEA survey indicates that European oil consumption is about 9 percent higher than a year ago, while non-OPEC oil production is lower by about 500,000 barrels a day.

Last month, our oil imports exceeded 40 percent of domestic consumption, compared to 37 percent in 1973. Moreover, over 50 percent of the imports were from OPEC members.

Meanwhile, domestic production has fallen by about 300,000 barrels per day since December, and this downward trend is accelerating. Similarly, our natural gas production capability is expected to decrease this year by about 663 billion cubic feet, following a drop of 553 billion cubic feet in 1985.

In the oil fields, there have been severe economic impacts as employment has declined by about 22 percent, or 126,000 jobs, in oil and natural gas extraction, including the service industries.

Current employment levels of 444,000 are 37 percent below the 1982 peak of 708,000, and that is 264,000 jobs.

What is perhaps most disturbing is the general lack of concern outside of the "oil patch" for the adverse effects of today's energy prices on our country's long-term energy security. Such concern has been expressed by this Senator and others as the carnage has been strewn across the landscape of our domestic energy industry.

Since our earlier hearings, a temporary accord has been reached in July by OPEC members establishing production goals for September and October in an attempt to bolster international oil prices. However, it is the opinion of Saudi Arabia's Oil Minister that it will take several years to achieve market stability at an expected price of $20 per barrel in 1992.

Should oil prices stabilize around $15 per barrel, a recent API survey estimates that domestic crude oil production will fall from its current 8.9 million barrels per day down to about 6.2 million barrels per day in 1991.

Similar energy information administration estimates are that at $17 a barrel, domestic oil production would fall to 7.2 million barrels per day by 1990.

Clearly, we are talking about a substantial loss of domestic production and attendant increased dependence on oil imports.

As the President's National Security Adviser, John Poindexter, wrote on August 5 to Senator Packwood, there is, and I quote, "An emerging national security concern related to oil production in the Persian Gulf * * * sometime in the early 1990's we are likely to see our oil imports rise to 7 to 10 million barrels per day and the Persian Gulf will once again become the major supplier to the free world (which) is likely to remain an unstable region. * * * We cannot insure against this instability merely by purchasing oil from non-Gulf sources."

[The letter referred to by the chairman follows:]

THE WHITE HOUSE
WASHINGTON

August 5, 1986

Dear Mr. Chairman:

I want to take this opportunity to raise with you an emerging national security concern related to oil production in the Persian Gulf. The low oil prices we are now experiencing have and will continue to benefit the U.S. economy through more rapid growth and lower inflation. In turn, lower prices stimulate oil imports and hence a resurgence in oil production from the Persian Gulf. Sometime in the early 1990's we are likely to see our oil imports rise to 7 to 10 million barrels per day and the Persian Gulf will once again become the major supplier to the free world.

The Persian Gulf is likely to remain an unstable region as we enter the 1990's. We cannot ensure against this instability merely by purchasing oil from non-Gulf sources. We live in a single, highly integrated world oil market. Any disruption of supplies is quickly realized by all oil-importing countries through higher prices and large GNP losses which are exacerbated by higher oil imports. In addition, a major oil disruption will place severe strains on our entire range of political-military resources.

The President has stressed over the last few months the importance of a viable domestic oil and gas industry to our national well being and energy security. As you are well aware, the dramatic oil price collapse of the past six months has severely hurt the oil and gas sector. Drilling activity is at a 46-year low with the latest rig count of about 700 in use, compared to a 1981 peak of 3970.

These trends underscore the critical importance, in my view, of retaining existing incentives for oil and gas exploration and development for the oil industry. To reduce the current depletion allowance of expensing of drilling costs would place an additional burden on an industry which is an important contributor to our security. Analysis by the Department of Energy indicates that retention of these incentives could avoid the loss of as much as 700,000 barrels per day of domestic oil production.

I ask that you keep these national security concerns in mind as you proceed with tax reform legislation.

Sincerely,

John M. Poindexter

The Honorable Bob Packwood
Chairman
Committee on Finance
United States Senate
Washington, D.C. 20510

cc: Conferee Members

The **Chairman**. The eventual outcome is unclear. What is clear, however, is the importance of full implementation of the International Energy Agreement, in particular those provisions regarding emergency stocks.

I have repeatedly urged that we take advantage of low oil prices to upgrade the strategic petroleum reserve.

Recently, on August 6, the President supported such an effort by the United States and called on other oil-consuming nations to upgrade their strategic stocks as the best defense against world oil supply disruptions. Much more can and should be done by our IEA partners to shoulder the burden of maintaining adequate emergency stocks.

Today's witnesses have been asked to address whether, as a matter of national energy or economic policy, the Federal Government should at this time undertake initiatives to protect and preserve our domestic petroleum production and to protect our national energy security.

We then turn to our first panel.

But first, Senator Bingaman do you have any statement that you would like to make at this time?

Senator **Bingaman**. I will just wait to question the panel.

Thank you, Mr. Chairman.

The **Chairman**. Thank you, Senator.

We will hear now from Mr. William F. Martin, Deputy Secretary, Department of Energy, and Mr. Allan Larson, Deputy Assistant Secretary for International Energy and Resource Policy, Department of State.

Mr. Martin.

STATEMENT OF HON. WILLIAM F. MARTIN, DEPUTY SECRETARY, DEPARTMENT OF ENERGY, ACCOMPANIED BY JOHN STANLEY-MILLER, DEPARTMENT OF ENERGY

Mr. **Martin**. Thank you, Mr. Chairman.

Let me say from the outset that you have summarized the issue extremely well. It is precisely the way we view the issue.

So, if I sound a little redundant, please excuse me.

The **Chairman**. I won't excuse you at all. I will commend you.

Mr. **Martin**. In fact, in the testimony which we have prepared, which I will not go through in detail——

The **Chairman**. It will be placed in the record in full.

Mr. **Martin** [continuing]. I would like to submit it because I think it wholeheartedly supports your message. It is quite detailed. It looks at the history, at how we have gotten to where we have gotten, and where we are going and what we need to do about it.

But, as you say, we certainly have not exhausted all of the various solutions that we can look at. So it is an openended question. That is why we appreciate the opportunity to testify today.

First and foremost, I think I want to say that we can't forget that the lower oil prices have brought a lot of good with them. I would only add that to your statement.

In fact, as I was coming in today and listening to the radio, there was a call-in. The fellow said, "Could you imagine that 5 years ago, if I had said that mortgage rates would be 9 percent, auto loans zero to 2.9 percent and a gallon of gasoline 75 cents in 1986, they would have put me away."

I think, first and foremost, these developments have been very positive, and we can't lose sight of that.

But, on the other hand, the situation in the oil States is one that we are very concerned about.

The President has said that he is whole-heartedly committed to a strong domestic energy industry. And he's also said that this administration is determined that America will never again be captive to a foreign oil cartel.

As you know, both John Poindexter, the National Security Adviser, and John Herrington, in discussions about tax reform—which is where the letter you quoted originated—are very concerned about the national security implications of rising imports.

If we look at the present situation, again, we agree with the numbers that you quoted. We'd also like to note that, while the consumption numbers are up, part of that is due to inventory building. In fact, we think more than half of the increase in consumption is due to temporary inventory building, which might later in the year reflect itself in lower demand during the winter months.

In addition, we note, as you did, that domestic production has declined by about 152,000 barrels thus far this year. But this is far less than the 62-percent drop in drilling rigs, which foreshadows larger production decreases in a few years, as exploration is cut back.

Over the longer term, we estimate that rising demand and falling production in our country could, indeed, lead to a situation of imports of 7 to 10 million barrels a day. I might add that this is a fairly conservative estimate. That assumes relatively low demand growth and not as steep a fall in oil production as some are estimating.

We think that's a fairly good range. But that certainly is the order of magnitude. And that is clearly about half of our total consumption.

More importantly, we view that our partners in IEA, the Europeans, the Japanese, and Third World countries, will also be increasing their demand. We estimate in here, for example, the non-U.S. part of the OECD will increase perhaps from 11.5 million barrels a day maybe up to 16 million by the mid-1990's. Of course, the bottom line here is the surplus capacity that exists in OPEC, and particularly in the Persian Gulf countries, and by the mid-1990's, we could once again find ourselves 50 percent dependent on the Persian Gulf for our oil.

Senator, as you have noted, in the Poindexter letter, he notes the uncertainty about the Persian Gulf region. We have the Iran-Iraq war. We have the increasing threat of terrorism in this region. We have the Soviets posed in Afghanistan. And I think none of us wants to see a time when we return to 50-percent dependence on this particular region.

At the same time, we have to note that there are many uncertainties in our projections. Indeed, whether or not the Iran-Iraq war stops or escalates is one concern and one uncertainty. Whether or not demand increases—you know, we are not using in Btu more energy today than we were in 1974. So the demand estimate also is uncertain as conservation continues. And, of course, the economic growth rates are uncertain.

There are a lot of uncertainties, but, clearly, the trends are toward greater imports.

One of the things which we would like to emphasize is that it's not only an oil problem and it's not only a domestic problem, it is a broader energy problem and it is an international problem because it is an integrated oil market. To the extent a coal-fired plant in Italy is built, that, ultimately, reduces dependence on the Persian Gulf as well as a coal plant in Ohio. Likewise, a nuclear plant that may not be built in West Germany because of Chernobyl is a cause for concern as well to us, because, again, the nuclear plant isn't built and then, indeed, the ultimate swing fuel is oil and the ultimate swing producer is the Persian Gulf.

So, the emphasis on international, the emphasis on a total energy problem, we like to keep to the forefront.

As you know, Mr. Chairman, we have been working closely with you to do a number of measures. At your urging, at the counsel of the Cabinet, the President has agreed to continue filing the SPR, a very important step. We have been seeking comprehensive natural gas decontrol legislation. We think that is an important step. We think FERC's decision on order 451 was an important step because if we can bring out more gas, that means less oil imports.

We are strongly supportive of repeal of the Windfall Profits Tax. We are strongly supportive of retention of tax incentives for oil and gas exploration. We are delighted that the conferees came to this conclusion as well.

We estimate that will save 700,000 barrels a day, not an insignificant amount.

We are for allowing temporary shut-in of stripper wells. We recognize the importance of stripper wells to energy production in this country. We commit a whole page to it in our testimony. And we are reviewing environmental and other regulations which are presently burdening the oil industry.

As I said before, we have been working with you as well on other matters pertaining to coal and nuclear, to which, again, we ascribe high importance, to insure that these alternatives continue to be important options for the 1990's.

We also note in our testimony that States have been doing a number of actions on their own, particularly in the stripper well case, and we would like to applaud those efforts.

But the bottom line, in my view, Mr. Chairman, is as you said: this isn't just our problem; this is an international problem.

We have been focusing in and mindful of your letter on strategic stocks which you, Senator Metzenbaum, and Senator Johnston sent us at the time of my confirmation hearing. The message of the Senators was very clear: why do we have to shoulder the burden of this—because a barrel stocked anywhere is a barrel stocked for us all, whether it is in Louisiana, or Texas, or if it's in Japan or Rotterdam. It's still a contribution to an integrated oil market and our allies have not pulled their fair share of the burden.

At your urging, Mr. Chairman, the President raised this issue at the Tokyo Summit and made it an important point. The language that came out of the communique wasn't as good as we thought. But the President, you know, when you give and take on these things, finally let this one be a little weaker than he would have wanted. But he said when he left, one of his last remarks was, "But beware of our Congress. They are very concerned about this issue and so am I, and you're going to be hearing back from us on this."

So, we have teams right now in Europe. Secretary Herrington is in Europe. One of the top items he has at the moment is stockpiles.

Now, what has happened?

Well, the Japanese actually have increased their stock build since your letter, from 50,000 to 60,000 barrels a day. The Koreans have added to their stocks. The Norwegians have announced plans to increase stocks. The West Germans and even the French have said that they will explore increasing government-controlled strategic stocks.

On the downside, the Swedes are not doing as well. They say that they want to get rid of their stocks.

But the point is, we are moving toward this important goal.

I think one of the lessons of the 1970's is that the key buffer you have is stocks, and if these other countries cannot carry their fair share, I think we have to continue to be very, very concerned.

This completes my formal remarks, Mr. Chairman. We would be glad to answer any questions that you may have.

[The prepared statement of Mr. Martin follows:]

STATEMENT

OF

WILLIAM F. MARTIN
DEPUTY SECRETARY
U.S. DEPARTMENT OF ENERGY

BEFORE THE

ENERGY AND NATURAL RESOURCES COMMITTEE
U.S. SENATE

CONCERNING

THE DOMESTIC AND INTERNATIONAL OIL SITUATION

September 18, 1986

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PRESIDENT'S MESSAGE

"This Administration is whole-heartedly committed to a strong, domestic energy industry . . . "

"This Administration is determined that America will never again be captive to a foreign oil cartel . . . "

EXECUTIVE SUMMARY

World oil prices dropped dramatically from $25 in January 1986 to less than $10 in July before rebounding to about $15 per barrel in September 1986. This decline benefits the U.S. economy and consumers by increasing economic growth; reducing the expected Federal deficit; and lowering gasoline and other fuel prices--thus, helping to reduce inflation. At the same time, low oil prices have adverse effects on the domestic oil industry by decreasing cash flow, jeopardizing oil industry loans, and sharply reducing capital expenditures and drilling.

If low oil prices persist, declining oil production and increasing demand will lead to growing U.S. oil imports and increased world reliance on oil from the potentially insecure Middle East. The central element of Administration energy policy is to minimize government intervention and allow markets to work. We need to continue these policies, while addressing the energy security concerns raised by low oil prices. An Administration goal is to seek adequate energy security at lowest cost, based on pursuing the following strategies:

- relying on markets rather than government-imposed solutions;
- maintaining adequate U.S. and foreign strategic oil stockpiles;
- encouraging fuel flexibility and economic diversification away from insecure oil and gas sources;
- maintaining momentum toward economic alternatives to oil, including conservation;
- maintaining a competitive domestic oil industry; and
- enhancing international cooperation to ensure complementary actions in other oil-consuming countries.

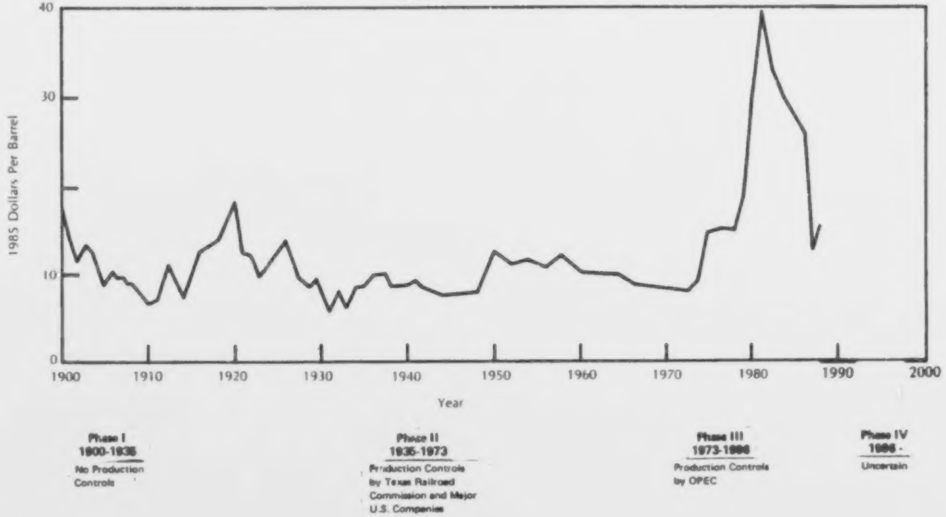
A competitive domestic oil and gas industry is important to long-term U.S. economic health and national security. The Administration and State governments have taken aggressive actions to help ensure a competitive domestic oil and gas industry, including:

- Strategic Petroleum Reserve: More than 500 million barrels of protection in the SPR; continuing SPR fill, including possible acquisition of domestic oil, and encouraging stockbuilding by our IEA partners.
- Natural Gas Decontrol: The Administration has consistently supported comprehensive natural gas decontrol legislation; the Federal Energy Regulatory Commission has raised old gas price ceilings (Order 451).
- Regulatory Relief: temporary shut-in of stripper production now allowed on Federal lands; reviewing environmental and other regulations burdening the oil industry.
- Tax Policy: support repeal of the Windfall Profit Tax and strongly support tax reform legislation that retains oil and gas exploration and production incentives.
- State Actions: reducing severance and other taxes; extending well-plugging deadlines; reducing electricity rates for oil and gas leases; and studying incentives for enhanced oil recovery.

There is but one, integrated world oil market -- international cooperation among oil-consuming nations is essential. The U.S. supports a strong market-based agenda that promotes international cooperation to: increase government strategic stocks; avoid government intervention and remove barriers to energy trade; promote a balanced, diversified and economic energy mix; and foster international collaboration on energy R&D.

OIL PRICES HAVE BEEN VOLATILE

U.S. Crude Oil Wellhead Prices
1900-1986



OIL PRICES HAVE BEEN VOLATILE AND ARE LIKELY TO REMAIN LOW IN THE NEAR-TERM

- The dramatic price increases in the 1970's spurred major efforts to develop alternative energy sources and to identify new opportunities to use energy more efficiently. These efforts were given an additional boost by President Reagan's action to decontrol oil markets in 1981. As a result of market forces, world dependence upon OPEC oil declined significantly from about 28 million barrels per day in 1980 to about 17 million barrels per day by 1985. Despite efforts by OPEC to sustain high prices, oil prices have fallen continuously since 1981.

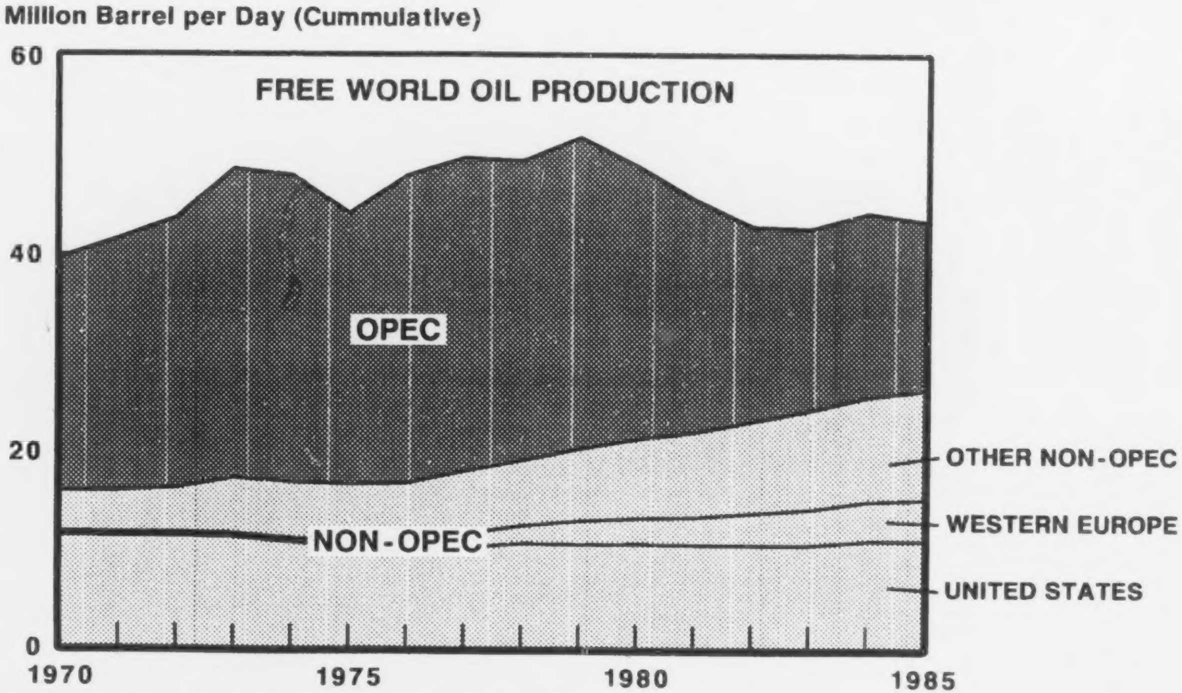
- Most of the burden of reduced OPEC production was absorbed by Saudi Arabia, whose crude oil production (excluding natural gas liquids) fell from about 10 million barrels per day in 1980 to close to 2 million barrels per day in the summer of 1985. This level of production was well below Saudi Arabia's production share agreed to by OPEC ministers in January 1984. In the fall of 1985, Saudi Arabia abandoned its role as "swing" producer. Between August and December 1985, Saudi Arabia doubled its crude oil production from about 2.3 to about 4.7 million barrels per day.

- In December 1985, OPEC nations decided to secure and defend their market share, meaning that OPEC would increase its oil production and drive down prices by competing with non-OPEC producers. Following that meeting, world oil prices collapsed from about $25 per barrel to about $10 to $15 per barrel.

- Through July 1986, internal conflicts within OPEC and differing interests among the 13 member nations prevented an agreement on production quotas to support higher oil prices. In August, OPEC reached a temporary agreement to reduce production by several million barrels per day through October 1986. If the agreement holds, world oil prices could temporarily stabilize at about $15 per barrel. It is uncertain at this time whether OPEC countries will avoid the temptation of cheating on production quotas. Quota violations would likely lead to another price war.

- With about 8 to 10 million barrels per day of excess oil production capacity worldwide, and only a minimal projected increase in world oil demand in the near term, world oil prices could remain low for some time.

NON-OPEC PRODUCERS HAVE GAINED MARKET SHARE AND INFLUENCE



OPEC - Organization of Petroleum Exporting Countries.
Note: Production includes natural gas liquids, other liquids, and refinery gains.

NON-OPEC PRODUCERS HAVE GAINED MARKET SHARE AND INFLUENCE

- While OPEC (especially Saudi Arabia) was reducing production between 1980 and 1985, non-OPEC oil production increased dramatically. Non-OPEC oil production rose from about 21.5 million barrels per day in 1980 to current production levels of close to 27 million barrels per day. The two largest areas of production increase were the North Sea, which accounted for about one-third of the increase and Mexico, which accounted for about 15 percent of the increase.

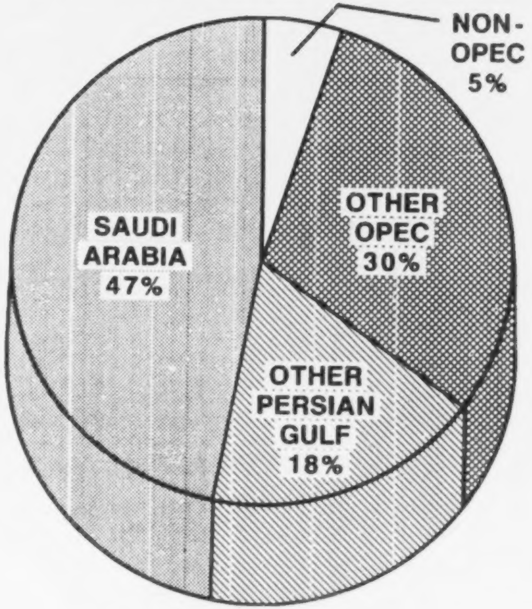
- Because non-OPEC producers now produce considerably more oil than OPEC, there is much less of an opportunity for OPEC to influence the world oil market.

- OPEC has sought to gain non-OPEC cooperation to limit oil production. The Soviet Union has stated that they will reduce oil exports to the West by 100,000 barrels per day for an unspecified duration. Several small non-OPEC producers have agreed to limit production by 30 to 50 thousand barrels per day.

- Two countries whose cooperation is of more importance because of the size of their production are Mexico and Norway. Mexico has agreed to cut production by about 150 thousand barrels per day. Norway has announced a reduction of exports of about 70 to 80 thousand barrels per day of oil that will be diverted to a permanent Norwegian strategic oil stockpile.

- The total expected non-OPEC production reduction is unlikely to exceed 500 thousand barrels per day.

MOST SURPLUS OIL PRODUCTION CAPACITY IS IN OPEC



Shares of Current
8 to 10 MMBD of
Surplus World
Production Capacity

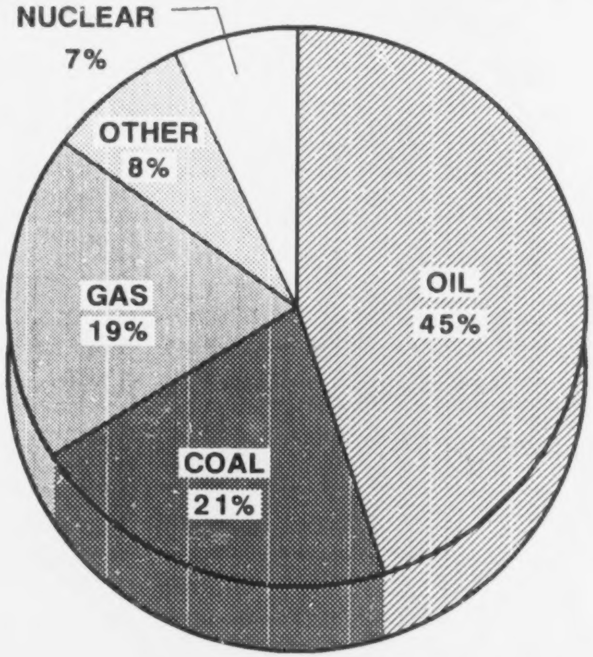
MOST SURPLUS OIL PRODUCTION CAPACITY IS IN THE PERSIAN GULF

- Throughout the period during which OPEC reduced production, non-OPEC producers have, for the most part, maintained production at close to a maximum sustainable level. As a consequence, most of the world's surplus oil production capacity has consistently remained in OPEC countries.
- Currently, the Department of Energy estimates that there is about 8 to 10 million barrels of surplus oil production capacity in the free world.
- The Department of Energy also estimates that the surplus capacity is shared as follows:

47%	Saudi Arabia
18%	Other Persian Gulf nations (this includes Iran, Iraq, Kuwait, United Arab Emirates, Qatar and Oman)
30%	Other OPEC nations
5%	Non-OPEC nations

- The energy security benefits of the current world surplus of oil production capacity are reduced by the fact that most of the surplus lies in the potentially insecure Persian Gulf region -- if a major interruption were to occur in that area, much of this surplus production capacity might not be available for use in offsetting the loss of oil from the disruption.
- On the positive side, the building of new pipelines has increased the ability to move oil out of the Persian Gulf without having to rely to such a large extent on the Strait of Hormuz. Also, most of the surplus capacity that now exists in other fuels like natural gas and coal, is located almost entirely outside of the insecure Persian Gulf -- in the U.S. alone this excess capacity amounts to over 2 million barrels per day of oil equivalent.

OIL REMAINS A CRITICAL FUEL



1984 Shares of OECD Energy Consumption

OIL REMAINS A CRITICAL FUEL

- Oil's share of OECD (Organization for Economic Cooperation and Development) energy consumption declined from a peak of about 54 percent in 1979 to about 45 percent in 1984 (the last year with complete energy data). Non-U.S. OECD oil consumption declined from about 23 million barrels per day in 1979 to about 18 million barrels per day in 1985.

- U.S. oil consumption peaked at about 18.8 million barrels per day in 1978 before declining to a 1985 level of about 15.7 million barrels per day.

- Despite its reduced role in the U.S. economy, oil remains a critical U.S. fuel. Oil remains the largest U.S. fuel source, accounting for about 42 percent of total domestic energy consumption.

    - 97 percent of all transportation fuel (including fuel for agricultural use) is oil for which there is no ready substitute.
    - 35 percent of industrial energy end-use is oil, a large share of which is for feedstocks for which there is no ready substitute.
    - 16 percent of residential and commercial energy end-use is oil, often for homes without access to natural gas distribution networks.

- However, other fuels in abundant supply have, over the last decade, eroded oil's market share in a number of key markets such as electric power generation, industrial use and residential/commercial heating.

- Current low oil prices will likely result in a small increase in U.S. and world oil demand in 1986:

    - United States oil consumption through July 1986 is up about 2 percent compared to 1985 (about 300 thousand barrels per day). Most of the increase has been for residual fuel and gasoline.
    - In Japan, current data indicate little increase in oil demand in 1986.
    - In Europe, oil demand increases for 1986 are expected to equal only 300 to 500 thousand barrels per day.
    - Total Free-world oil demand could increase by about one million barrels per day in 1986 over 1985.

LOW OIL PRICES BENEFIT THE U.S. ECONOMY

LOW OIL PRICES WILL, OVER THE LONG TERM, BENEFIT THE U.S. ECONOMY BY:

- -- REDUCING CONSUMER EXPENDITURES FOR GASOLINE, HEATING OIL, NATURAL GAS AND OTHER FUELS
- -- REDUCING INFLATION AND INTEREST RATES
- -- REDUCING THE FEDERAL DEFICIT

LOW OIL PRICES BRING ECONOMIC BENEFITS

o The near 50 percent decline of oil prices in the spring of 1986, will provide long term benefits to the U.S. economy by:

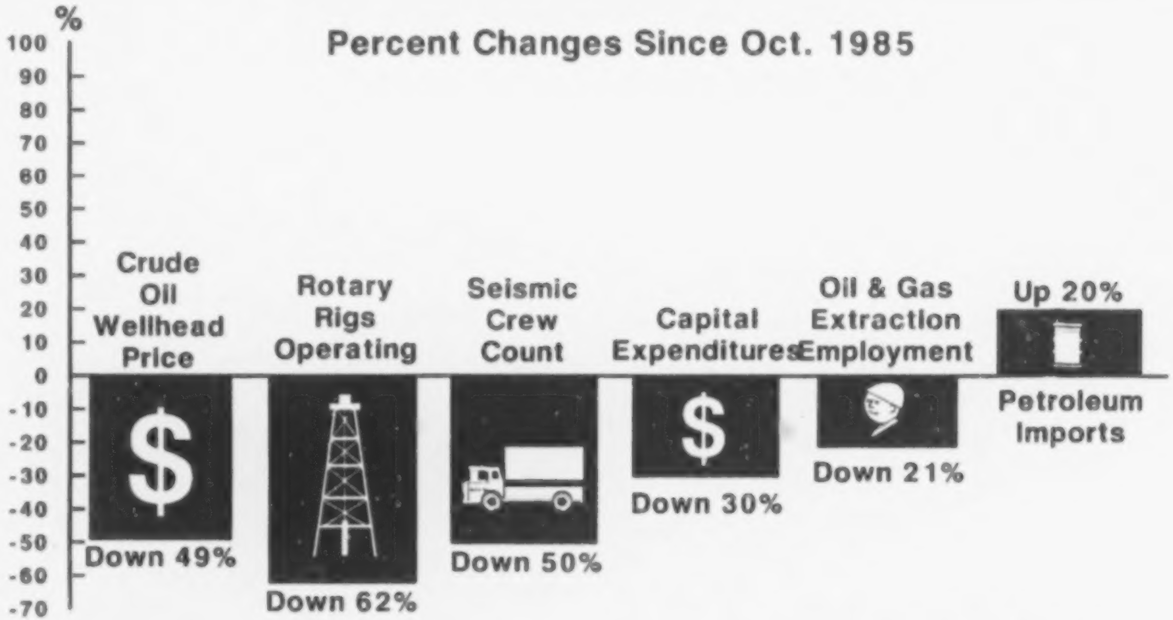
  -- lowering prices of gasoline, home heating/cooling bills and other petroleum product prices as well as the prices of competing fuels like natural gas and coal (today's real gasoline prices are lower than anytime since 1949)
  -- reducing inflation by 1 or 2 percentage points resulting in lower interest rates
  -- reducing the expected 1987 Federal deficit by about $15 to 20 billion
  -- thus establishing conditions that will promote long-term economic growth

o Low oil prices have already resulted in substantial benefits to domestic petroleum-consuming industries and consumers, such as:

  -- airlines
  -- petrochemicals
  -- trucking
  -- domestic auto manufacturers

o Internationally, low oil prices benefit the economies of oil dependent consuming nations within the Organization for Economic Cooperation and Development, like Japan, and are especially helpful to oil dependent Less Developed Countries with high debt burdens.

LOW OIL PRICES BENEFIT THE ECONOMY, BUT THREATEN FUTURE OIL PRODUCTION



Percent Changes Since Oct. 1985

SOURCE: Visual Concept IPAA
Department of Energy Numbers

LOW OIL PRICES BENEFIT THE U.S. ECONOMY BUT THREATEN DOMESTIC OIL PRODUCTION

- Although low oil prices have economic benefits for oil-consuming regions, they have a negative impact on the domestic oil industry -- particularly the major oil producing states of Texas, Alaska, Louisiana, Oklahoma, and California. The American Petroleum Institute estimates that by the end of 1986, 250,000 oil and gas related jobs may be lost due to the oil price collapse. Oil companies have reduced staffs through layoffs or early retirement programs. States have lost major sources of revenue for services and education programs. Royalty payments have been reduced.

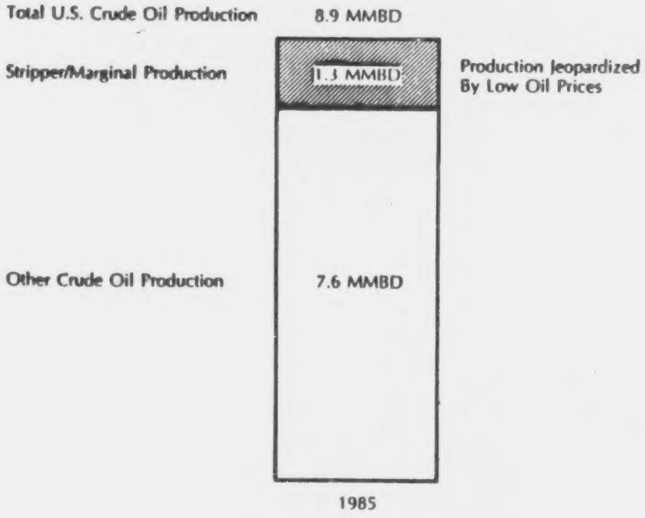
- Capital expenditure programs for oil exploration and development have dropped by nearly 50 percent since the record high year of 1981. Major oil companies have decreased their spending by about 30 percent for 1986. Independents have slashed their capital programs by 50 percent or more for this year.

- Drilling activity, as measured by rigs in use, is at a 46-year low. For a while in July the rig count was below 700, compared to a 1981 peak of 3970 rigs. Since July, the rig count has increased and now averages about 700 to 750.

- Lower capital expenditures and decreased drilling activity will lower reserve additions and domestic production for future U.S. energy needs. Also, when prices rise in the future, it will take several years before a significant new production response can be achieved. Skilled personnel, specialized knowledge, and equipment needed to develop oil reserves will also be reduced if oil prices remain low. The reduction in oil expenditures will decrease the number of independent drillers and producers, who drill 70 percent of total footage.

- Experience of the 1970's and early 1980's did show, however, that the domestic oil industry can respond quickly to rapidly increasing prices.

STRIPPER WELL PRODUCTION IS THREATENED



Estimated Stripper Well
Production Losses

Oil Price ($ Per Barrel)	Barrels Per Day
$10	638,000
$15	277,000
$20	107,000

Source: IOCC, March, 1986

HIGH-COST OIL PRODUCTION, ESPECIALLY FROM STRIPPER-WELLS, IS VULNERABLE

- High-cost U.S. oil production includes oil from stripper wells, enhanced oil recovery projects, and other marginal oil supplies with operating costs in the $10 to $20 per barrel range. Most high-cost domestic oil production is from stripper wells.

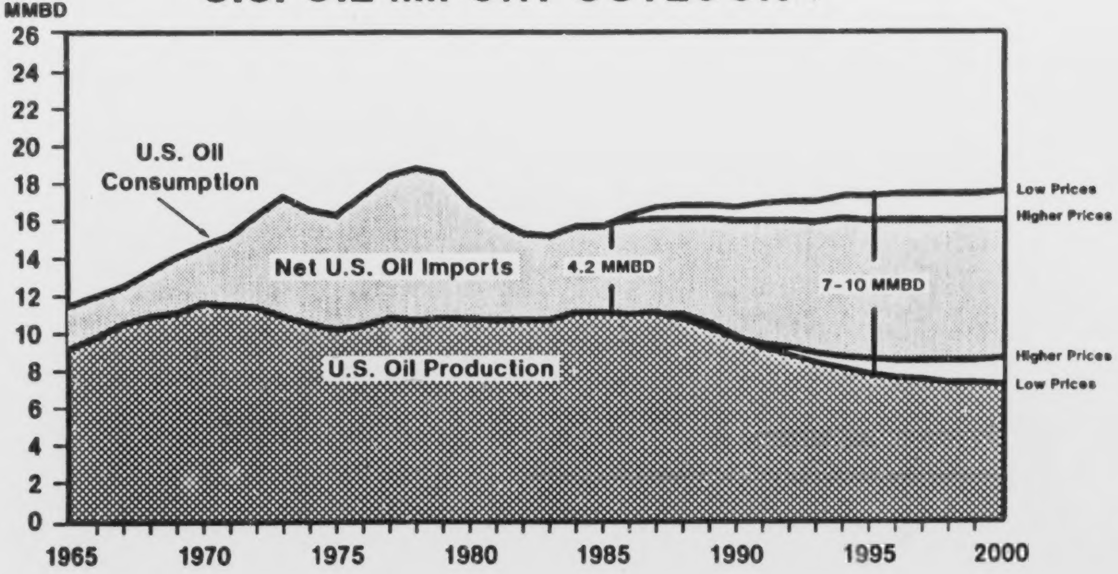
- Any oil well in the United States that produces 10 barrels or less per day is called a stripper well. Average daily production of the 450,000 U.S. stripper wells is less than 3 barrels per day per well. Average production of domestic non-stripper wells is 45 barrels per day. Low volume wells tend to have high production costs. In the Middle East, an average well produces over 1,600 barrels per day.

- Domestic stripper wells produce a total of 1.3 million barrels per day, which is about 15 percent of U.S. oil production. Over half of all stripper wells are in three states - Texas, Oklahoma, and Kansas. One-third of all stripper well production comes from Texas and one fifth from Oklahoma. Nearly half of all stripper-well oil reserves (2 billion barrels) is in Texas.

- Stripper wells have lifting costs from $8 to $24 per barrel. At current low oil prices, many owners and operators find stripper wells uneconomic to operate and have temporarily shut-in production.

- Current laws on Federal and most State lands allow stripper wells to be temporarily shut-in for up to one year. If they are not re-opened by then, the wells must be permanently sealed with concrete primarily for safety and environmental concerns. Once stripper wells are plugged and abandoned, they are rarely reopened because of the high expense.

U.S. OIL IMPORT OUTLOOK



U.S. NET OIL IMPORTS COULD INCREASE TO 7 TO 10 MMBD IN THE 1990'S

- Despite the uncertainties about the evolution of the future oil market, it is likely that the recent decline in oil prices will lead to an increase in U.S. oil imports. The size of oil import increase is highly uncertain depending on how low oil prices go, how long prices remain low and the consequent demand and supply responses.

- Net U.S. imports of crude oil and petroleum products fell from a high of 8.6 in 1977 to 4.2 million barrels per day in 1985 (excludes SPR purchases). This 4.4 million barrel per day decline in U.S. oil imports is greater than any other OECD country's current oil consumption.

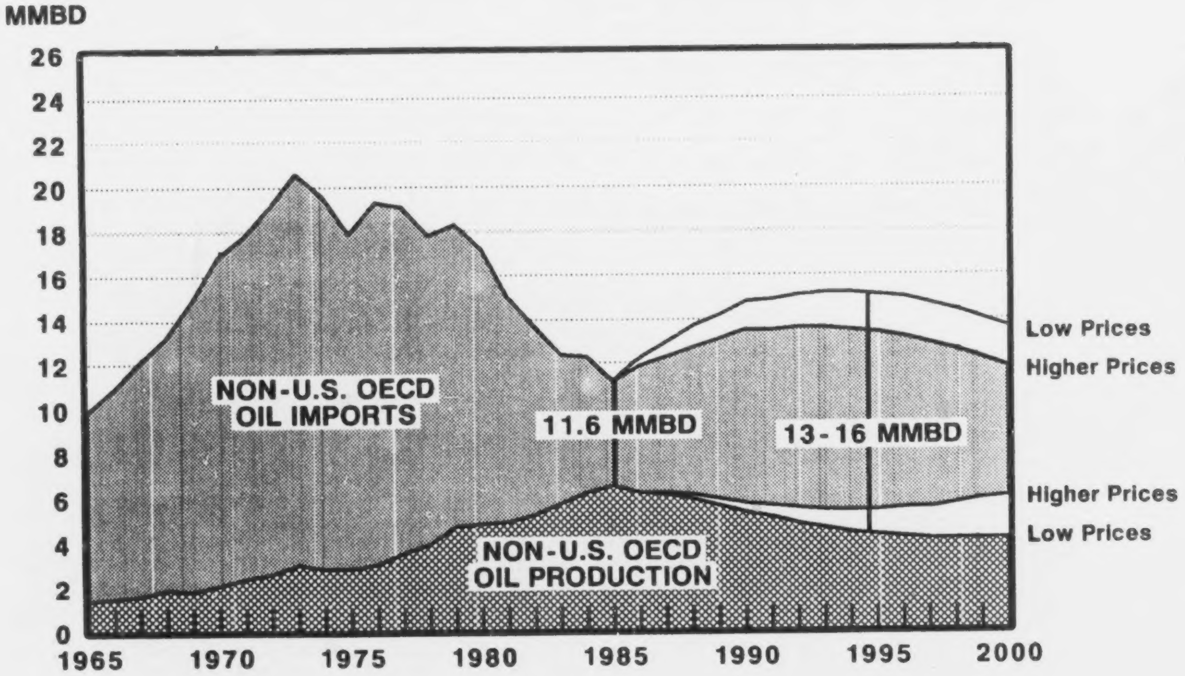
- In the short term, oil imports have increased somewhat in response to lower oil prices. Through July of this year, oil imports are up about 800 thousand barrels per day compared to 1985. However, about half of increased imports can be explained by increased oil inventories.

- Over the longer term, U.S. oil imports could increase considerably more. Under low price scenarios and continued strong economic growth, U.S. oil production could decline significantly and U.S. oil consumption could rise slightly since conservation gains are likely to continue. Department of Energy projections show U.S. net oil imports in the range of 7 to 10 million barrels per day in the mid 1990's -- about one half of total projected U.S. oil consumption (these scenarios assume oil prices rise from $10 to $15 in the near term to $25 to $35 per barrel in 2000 in 1985 dollars).

- It is worth noting, however, that projecting longer term oil prices and import levels involves substantial uncertainty.

- Finally, it is important to keep in mind that government allocation restrictions -- not the level of our imports -- exacerbated the gasoline lines and shortages that occurred in 1973/1974 and again in 1979. The government limited the ability of suppliers to move fuel to where it was needed. The level of our imports per se is not a complete measure of our energy security.

NON-U.S. OECD OIL IMPORT OUTLOOK



NON-U.S. OECD OIL IMPORTS COULD ALSO INCREASE

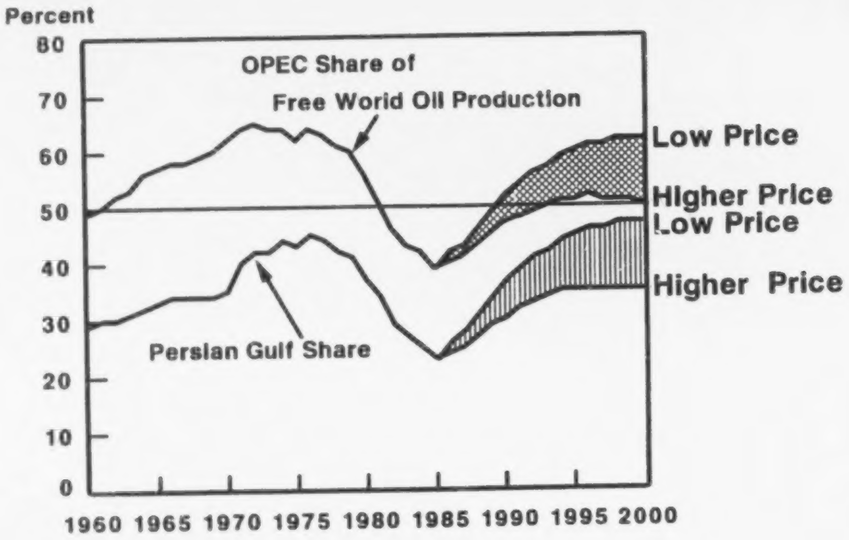
o Oil import uependence is high for our partners in the Organization for Economic Cooperation and Development (OECD).

o Non-U.S. OECD oil import dependence in 1985 was over 60 percent. Japan is almost totally dependent on oil imports, while Western Europe is about 60 percent dependent.

o Canada, Norway and Great Britain, however, are completely self-sufficient in oil and actually have sufficient oil to allow oil exports.

o Over the long term, under low oil price scenarios, non-U.S. OECD oil production could decline and consumption increase despite continuing conservation gains. One set of projections shows non-U.S. OECD oil imports in the range of 13 to 16 million barrels per day -- which translates into oil imports about 70 percent of total consumption -- considerably higher than the projected U.S. situation.

LOW WORLD OIL PRICES CONTRIBUTE TO A GROWING WORLD RELIANCE ON INSECURE OIL SUPPLIES



LOW OIL PRICES CONTRIBUTE TO A GROWING WORLD RELIANCE ON INSECURE OIL SUPPLIES --HOWEVER, OUR ABILITY TO COPE WITH DISRUPTIONS IS ALSO GROWING

- A key economic lesson of the 1970's was that oil-consuming nations are dependent on a single, integrated oil market. Due to worldwide trade in oil, a price rise in one or more nations will raise prices for all consumers.

- Nearly 60 percent of the world's lowest-cost oil reserves are in the Persian Gulf countries of Saudi Arabia, Iran, Iraq, Kuwait and the United Arab Emirates. The entire region is viewed as having the potential for temporary interruptions in supplies and is in this sense less secure than other producing areas. One of the major international problems of the 1970's was the sharp increase in oil prices that resulted from temporary decreases in supply. Many countries, including the U.S., imposed price controls that only made matters worse.

- A stated objective of the U.S. and all International Energy Agency countries is to lower dependence on insecure sources of oil through greater indigenous production where doing so is cost-effective; economic diversification of energy supplies; increased conservation; and establishment of emergency petroleum reserves. Since its peak in 1979, the Persian Gulf share of the market has been reduced considerably because of very high world oil prices.

- However, falling prices and increased OPEC oil demand could provide an opportunity for OPEC producers to exercise pricing power over oil during the 1990's. This could pose an economic and energy security threat since we are likely to face continuing political insecurities in the Persian Gulf and North African regions. On the other hand, a continuing need for cash flow for all of these countries reduces the likelihood of their achieving adequate production quotas to force prices higher.

- Our ability to cope with oil supply interruptions has improved since the 1970's. In the 1970's we did not have large government strategic stocks and we relied on government price and allocation systems in the U.S. to manage oil supply disruptions.

- Today, we are in better shape with over 500 million barrels of oil in the U.S. strategic stockpile alone and with considerable stocks in other countries. Our reliance on market-oriented policies to manage disruptions reduces our economic vulnerability since our response will be more cost effective. Finally, the experience of OPEC nations should lead them to be more temperate about oil price increases both during and subsequent to a future oil supply disruption.

MANY “WHAT IF“ OIL MARKET SCENARIOS ARE POSSIBLE

WHAT IF:

-- OIL DEMAND DOES / DOES NOT INCREASE MUCH IN RESPONSE TO LOWER OIL PRICES

-- THE IRAN / IRAQ WAR EXPANDS OR ENDS

-- FUTURE ALTERNATIVE ENERGY SUPPLIES ARE HIGHER / LOWER THAN EXPECTED

MANY "WHAT IF" OIL MARKET SCENARIOS ARE POSSIBLE

- Diverse oil market scenarios are possible and have different implications for future oil prices, U.S. oil imports and other critical conditions.

- Oil Demand -- A critical uncertainty for the oil market both in the near and longer term is the response of oil demand to lower oil prices. Our analysis assumed that oil demand increases but not dramatically in response to lower oil prices. If oil demand were to increase rapidly, then oil imports would increase and sustained low oil prices would be less likely.

- Iran/Iraq War --Another complicating factor affecting the oil market is the ongoing Iran/Iraq war. The war still has the potential to disrupt oil flows from the Persian Gulf. There are indications that there may soon be a major Iranian offensive. In the unlikely event that the war soon ends, increased production from that region could potentially lead to conflict within OPEC about how to apportion that production. Depending upon how the war ends, the entire region could become more or less stable and subject to potential oil supply disruptions.

- Alternative Supplies -- Larger increases than assumed in alternative supplies could lead to lower oil demand. There is cause for optimism concerning natural gas, an abundant, widely used fuel, which can easily substitute for oil in many applications. In fact, current excess production capacity for natural gas improves the energy security situation considerably. There is also a huge surplus of coal production capacity that would be available to meet increased industrial and utility demand growth.

OIL POLICIES SHOULD SEEK ADEQUATE ENERGY SECURITY AT LOWEST COST

GOAL: Seek Adequate Energy Security at Lowest Cost

STRATEGIES:

- Rely on Markets Rather Than Government Imposed Solutions
- Develop Adequate Strategic Oil Stockpiles
- Maintain a Competitive Domestic Oil Industry
- Encourage Fuel Flexibility and Diversification Away from Insecure Oil and Gas Sources
- Maintain Momentum Toward Alternatives to Oil-Conservation, Gas, Coal, Nuclear and Renewables
- Promote International Cooperation Through the IEA and other Forums to Ensure Complementary Actions.

THE U.S. GOVERNMENT CONTINUES TO PROTECT ENERGY SECURITY

- Increase the Strategic Petroleum Reserve: More than 500 million barrels of protection are now in the SPR. The Administration has reaffirmed the 750 million barrel SPR target; will continue to fill the SPR, including possible acquisition of domestic oil; is committed to early drawdown of the SPR in the event of an oil disruption and is continuing efforts to encourage our IEA partners to increase their government strategic oil stocks.

- Promote Natural Gas Deregulation: The Administration's comprehensive natural gas legislation will provide incentives to increase production of low-cost gas reserves; open up pipeline transportation to increase efficiency; and eliminate gas demand restrictions (such as in the Fuel Use Act) -- all of which will contribute to lower natural gas prices.

- FERC Measures to Improve Gas Regulations: The Federal Energy Regulatory Commission (FERC) Order 451 promotes production of low-cost natural gas reserves by raising old natural gas price ceilings. Also, FERC Order 436 seeks to open access to gas transportation.

- Retain Oil and Gas Tax Incentives: The Administration strongly supports tax reform legislation which retains the depletion allowance and expensing of intangible drilling costs as incentives for oil and gas exploration and production (analysis indicates oil and gas production losses of 700,000 b/d are avoided by retaining these incentives).

- Repeal the Windfall Profit Tax: The Administration supports repeal of the Windfall Profit Tax (repeal would lose little, if any, revenues and would eliminate a significant administrative burden for producers and the government).

- Allow Shut-In Oil Production: The Administration now allows temporary shut-in of stripper-well production on Federal lands and, subject to Department of Interior review, will allow temporary suspension of offshore oil and gas production on Federal leases.

- Reduce Regulatory Burdens: The Environmental Protection Agency, Department of Commerce and Department of the Interior will review environmental and other regulations burdening the oil industry. Also, the Department of the Interior has proposed a new 5-year offshore leasing plan for 1987 - 1992 for the outer-continential shelf (OCS) and will focus on areas where most oil and gas production is expected.

We are continuing to look for other appropriate measures.

STATE ACTIONS TO PROVIDE INDUSTRY RELIEF

- Reduction in Severance and Other Taxes
- Delay of Well-Plugging Deadlines
- Reduction in Electricity Rates for Oil and Gas Leases
- Study of Incentives for E.O.R. Production

STATES HAVE ALSO TAKEN ACTION TO PROVIDE RELIEF TO DOMESTIC OIL PRODUCERS

ALABAMA -- The "privilege tax" on Enhanced Oil Recovery (EOR) production was reduced from 8 percent to 4 percent in 1985.

KANSAS -- The Kansas Corporation Commission reduced electricity rates for oil and gas leases, cutting costs by 15 to 20 percent and thereby postponing the shut-in of some marginal production.

LOUISIANA -- Production from new oil and gas wells has been made exempt from the 6 percent state severance tax until January 1, 1990, or until the price of West Texas Intermediate Crude oil exceeds $29.50 per barrel. "Low production" wells are also exempt through July 1, 1988. This is expected to lead to the drilling of more than 200 new wells and the creation of approximately 10,000 new jobs in Louisiana.

MISSISSIPPI -- The severance tax for carbon dioxide projects was reduced in 1984, as an incentive to EOR production.

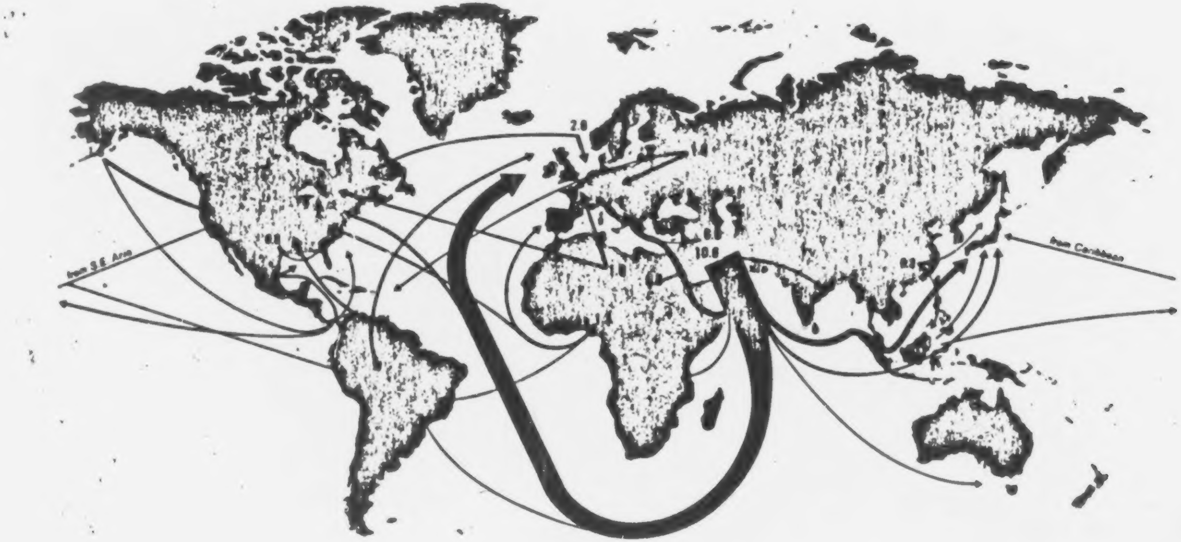
MONTANA -- Severance tax on oil was reduced from 6 percent to 5 percent for conventional oil and from 5 percent to 2.5 percent on new incremental tertiary production in 1984. The "Net Proceeds Tax" was restructured in 1985 to allow relief for production from discoveries made after July 1, 1985.

NEW MEXICO -- The state is participating in a major study to evaluate the benefits from a tertiary recovery incentive program. This study could serve as a model for nationwide evaluation of Enhanced Oil Recovery incentives.

OKLAHOMA -- The Oklahoma Corporation Commission reduced electricity rates for oil and gas leases, thus reducing the operating costs of marginal wells and postponing the need to shut in production. The plugging deadline for inactive wells has been extended from 90 days to 2 years.

TEXAS -- The Texas Railroad Commission changed its well-plugging rules to allow inactive wells to remain unplugged for up to 1 year, rather than 90 days.

THE INTERCONNECTED OIL MARKET



INTERNATIONAL COOPERATION AMONG OIL-CONSUMING NATIONS IS ESSENTIAL

- There is but one, integrated world oil market. A barrel of oil or energy conserved, produced (whether nuclear, coal, gas or renewables), or stocked in one nation helps all other nations to reduce collective dependence on insecure oil supplies. Conversely, overdependence on a single source of supply, even by one nation, has a negative affect on the energy security of other nations.

- The energy security concerns created by the location of about 60 percent of the world's cheap oil reserves in the Persian Gulf -- a potentially unstable region -- are concerns for all oil-consuming nations. No individual country, not even one as large and economically powerful as the United States, can insulate itself from the impacts of a major oil supply disruption with attendant oil price increases. To achieve the goal of adequate energy security requires international cooperation among oil-consuming nations.

- The International Energy Agency (IEA) was established in 1974 to deal with international energy issues. The agency has been instrumental in preparing participant countries to deal with, and preferably prevent, energy security threats by providing a forum for the development and implementation of cooperative policies among member countries.

- In 1983, IEA member countries agreed to guard against increased vulnerability from reliance on insecure energy supplies and, in particular, to avoid undue dependence on any one source of natural gas imports and to obtain future gas supplies from secure sources.

- In 1984, IEA participants reaffirmed their commitment to the importance of adequate government oil stocks and early coordinated stock draw in the event of a supply disruption.

- In 1985, IEA energy ministers, largely in response to a strong stand taken by Secretary of Energy Herrington, made considerable progress toward implementing an effective market-based international energy agenda. The challenge now is to maintain the momentum of the 1985 agreements and actively strengthen them in response to the dramatic energy events in the spring of 1986 -- Chernobyl and the world oil price collapse .

AGENDA FOR INTERNATIONAL COOPERATION

-- INCREASE IEA GOVERNMENT STRATEGIC OIL STOCKS AND COORDINATE EARLY GOVERNMENT STOCK DRAWDOWN DURING DISRUPTIONS

-- AVOID GOVERNMENT INTERVENTION IN MARKETS AND REMOVE BARRIERS TO ENERGY TRADE AND PRODUCTION

-- SEEK A BALANCED AND DIVERSIFIED ENERGY SUPPLY SYSTEM INCLUDING DIVERSIFICATION OF OIL AND GAS SUPPLIES FROM INSECURE SOURCES

-- SEEK PRODUCTIVE COLLABORATION ON COSTLY ENERGY RESEARCH AN DEVELOPMENT

THE UNITED STATES SUPPORTS A STRONG INTERNATIONAL ENERGY AGENDA

- o The United States supports a strong market-based international energy agenda:

  Government Stockpiles -- The most cost-effective strategy to cope with disruptions is through coordinated build and drawdown strategies for government crude oil stockpiles (as called for in the July 1984 IEA agreement adopted at U.S. urging). The U.S. continues to favor early and extensive use of strategic oil stocks to minimize the adverse economic consequences of an oil supply disruption.

  Avoid Government Intervention and Remove Barriers to Trade -- The U.S. government remains opposed to the imposition of oil import fees, restrictions on refined product imports, or other actions that might inhibit free trade in energy. The U.S., for example, welcomed Japan's removal of its ban on imported gasoline.

  A Balanced and Diversified Energy Supply System -- The U.S. supports actions to continue the safe and reliable growth of nuclear power (including streamlined nuclear plant licensing, standardized designs, radioactive waste management programs, and strong nonproliferation goals and practices), and to remove regulatory and other impediments to the efficient use of natural gas, coal and renewables. Such actions increase the ability of these fuels to substitute for oil and will limit the extent to which future oil prices can increase. The U.S. also supports economic actions to diversify oil and gas supplies away from insecure sources.

  International Collaboration on Energy R & D -- The U.S. remains a strong supporter of international energy R & D efforts and supports the concept of joint research and development programs, including the allocation of research tasks within such programs. Within existing budget constraints, the U.S. further supports the IEA objective of pursuing R&D actions in clean use of coal, advanced techniques of resource exploitation and energy technology information systems, while continuing to support the ongoing activities in fossil fuels, renewable energy, fusion technology and greater energy efficiency.

- o This fall and winter, Secretary of Energy Herrington and other government officials plan to attend a variety of meetings with high level officials in the IEA and other nations to foster communication and to stimulate new efforts at international energy cooperation. In addition to the exchange of information and views, the U.S. will seek mutual agreement on a strong market-based agenda for international energy actions that moves us toward a more secure energy future.

The CHAIRMAN. Thank you very much.
Mr. Larson.

STATEMENT OF ALAN P. LARSON, DEPUTY ASSISTANT SECRETARY-DESIGNATE, FOR INTERNATIONAL ENERGY AND RESOURCE POLICY, DEPARTMENT OF STATE

Mr. LARSON. Thank you, Mr. Chairman.

I do also welcome the opportunity to testify. I would like to submit my written statement for the record and will give you a brief summary.

The CHAIRMAN. Your entire statement will be placed in the record.

Mr. LARSON. Thank you.

Mr. Chairman, the international energy market will continue to be characterized by volatility and uncertainty. We feel that this instability results in part from the efforts in the past and currently by OPEC governments to set or influence international oil prices.

We find ourselves in an awkward transition. The forces of the market are increasing. They are already growing in influence. But, at the same time, OPEC is attempting to reassert its control.

Between 1979 and 1985, the OPEC countries maintained high prices by restricting supply. This required that they nearly halve their production levels. Expressed in relative terms, OPEC's share of free world oil consumption fell from 65 percent in 1979 to 35 percent in 1985. By 1985, the strategy of defending prices through production cutbacks had reached a dead-end.

Saudi Arabia sought to increase its market share by introducing a net-back pricing scheme in which crude oil is priced at the value at the time of arrival of the refined products that come from it. Other countries soon adopted similar market-sensitive pricing policies.

By early August, OPEC production had soared to 20 million barrels a day and prices had skidded to below $10 per barrel.

Now, the temporary agreement that was reached by OPEC calls for production quotas totaling about 16.8 million barrels per day for the months of September and October. It caused, on announcement, a nearly instantaneous $4 a barrel rebound in prices. Eighteen days into that 2-month agreement, the OPEC production seems to be more or less in line with those production quotas.

Nevertheless, there is a large supply overhang that, in our opinion, will make it difficult for the OPEC countries to push prices up significantly in the short term and could result in some weakening of prices.

Oil imports by the United States and the other OECD nations are up, not dramatically, except in August, when they temporarily shot up as a result of stock building. As compared to the 1970's, our imports are lower and more diversified.

Now, we have all commented on the fact that lower oil prices have caused very serious problems for oil producers in the United States and other countries. Nevertheless, we also realize that these prices provide net benefits to our economies. Consumers have more money to spend on other products. In the second quarter, U.S. consumers increased their real consumption expenditures by 6.5 percent.

The U.S. GNP figures for that quarter do not yet fully reflect the gains in purchasing power, in expenditure, and in well-being that are attributable to lower oil prices.

Mr. Chairman, turning to energy security, we feel that increased levels of strategic oil stocks provide the best and most efficient production against future supply disruptions.

As Mr. Martin indicated, the President has reconfirmed the committment of the United States to a 750-million-barrel SPR, and we are continuing to fill the SPR. At the Tokyo Summit, he urged the leaders of other summit countries to increase their nation's stock levels, and the Departments of Energy and State have been following up vigorously on the President's initiative with our partners in the IEA.

We have seen some promising signs of support, especially from the Japanese. But there is also resistance, and we agree with you, sir, that there is much more that needs to be done.

The CHAIRMAN. I apologize for interrupting, but I was smiling simply because you used a word that is perhaps a "double entendre." You said "promising results."

We have been getting promises for a long time.

Mr. LARSON. That's right.

I suppose that word justifiably can be used in two senses, sir. Some of the promising results are concrete. In other words, the Japanese are filling and have increased their fill rates, and they are giving us strong support. In other cases, we see signs of movement, signs that there is reconsideration of positions that is being done. But, as I detail in my testimony, there is some resistance, and we have work to do.

At a time when prices are lower and more volatile, we feel the nations in the IEA need to do everything they reasonably can to enable their energy industries to compete effectively. We support at the State Department the measures that were summarized by Secretary Martin, aimed at removing unnecessary fiscal and regulatory barriers to energy production in the United States. And we will be urging other IEA energy producing nations to take similar measures.

We also advocate removing barriers to energy trade and avoiding new barriers. We will be giving very high priority to both efforts this year.

Mr. Chairman, attempts to set international oil prices by Government fiat lead to greater market instability. This is true whether the attempts are made by producer country governments, consumer country governments, or both acting together.

We feel that an oil import fee or a variable import levy would have damaging effects on the economy, particularly with respect to economic growth and investment. A fee also would expose us to the risk of retaliation.

We also oppose strongly multilateral producer-consumer dialog on energy production and pricing, believing that these are matters that are best left to the market.

Finally, Mr. Chairman, we see the need for a steady approach to the energy security problem. In many important respects, the energy security of the United States and our allies has improved. But we recognize that the high concentration of the world's known petroleum reserves in the Persian Gulf insures that energy security will be a continuing concern for us all, well into the next decade.

That concludes my oral presentation.

I also am ready to answer any questions.

[The prepared statement of Mr. Larson follows:]

STATEMENT BY

ALAN P. LARSON
DEPUTY ASSISTANT SECRETARY - DESIGNATE
FOR INTERNATIONAL ENERGY AND RESOURCES POLICY
DEPARTMENT OF STATE

BEFORE THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

SEPTEMBER 18, 1986

I. INTRODUCTION

Mr. Chairman, thank you for the opportunity to testify before the Committee on the international oil situation and its implications for our economic health and energy security. I will concentrate on developments of the last six months, updating testimony presented by the State Department on March 25.

II. CURRENT OIL MARKET

A. Background to the Present Situation

In March when the Department last testified, crude oil prices had fallen sharply from a 1985 average of $27 to reach $14 per barrel, which seemed a shockingly low level at the time. The conventional wisdom then was that prices would remain low and rise only gradually over a matter of years. Few predicted that oil prices would fall further to $9, that OPEC would reach a temporary production restraint agreement, and that prices would bounce back to $14. As we have seen so often in the past, the international oil market is full of surprises. Indeed, I foresee an international oil market that will continue to be characterized by volatility and uncertainty.

The current market instability is, of course, a direct consequence of OPEC's efforts in the 1970's to assert control over international oil prices. The cartel brought about instability as it gained strength and maintained artificially high prices, and it is fostering instability now as its grip on the market is weakening. We are now in the midst of an awkward transition in which market forces are struggling to increase their already growing influence at the same time that OPEC is attempting to reassert control over production and prices.

The dramatic changes in international oil markets were not mandated by governments but rather were the result of countless decisions by consumers and business responding to powerful market forces. In many cases, of course, improved government energy policies contributed to favorable developments by enlarging the scope in which market forces could operate, most notably the decontrol of domestic oil prices in the United States.

By pushing oil prices significantly above the costs of production and competing fuels and by attempting to maintain them at these levels, OPEC members placed themselves in the role of residual suppliers to a shrinking market. Consumers converted to alternative fuels and reduced energy use generally in response to sharply higher energy costs. Non-OPEC producers responded to the high price regime by expanding production, thus OPEC's output fell from 28 MMBD to 17 MMBD between 1980 and 1985 as they lost market share in the shrinking market.

B. Oil Policies of OPEC Nations During the Past Year

By mid-1985, key OPEC members decided that their financial requirements dictated that they not continue to cut production indefinitely. Saudi Arabia dropped its role as swing producer within OPEC, increased its oil production and adopted a market-related system of on-arrival, netback pricing. The rest of OPEC soon followed. In December 1985 the organization announced its intention to regain its eroded market share. The reality of the situation had become clear: to regain market share OPEC had to price its oil competitively.

Though Saudi Arabia was not the first OPEC member to abandon official selling prices, it was the first to institutionalize a netback scheme by which crude oil is priced according to the value, at the time of arrival, of the refined products derived from that crude, less transportation and refining costs. Other OPEC nations quickly adopted market-related pricing schemes too. OPEC production crept upward throughout this year to over 20 MMBD in August, from a 1985 average of 16 MMBD. As production soared, prices skidded to $9/barrel.

C. The August OPEC Agreement

After several failed attempts at recreating production restraint agreements, OPEC Ministers in August reached a temporary accord. Upon announcement of their agreement to cut total production to about 16.8 MMBD during September and October, prices rebounded by about $4/barrel. Expectations of reduced supply, combined with the desire to acquire heating season inventories before the agreement went into effect, appear to have been the principal causes of the immediate recovery in prices. There has been no particular trend to prices during the last month.

Now eighteen days into the two month agreement, OPEC countries appear to have brought their production more or less in line with their quotas. In addition, OPEC has called for cooperation from non-OPEC producers, indicating a realization that the organization no longer can set prices unilaterally. Most non-OPEC support -- from Mexico, the USSR, Egypt, Oman, Brunei, Angola, Malaysia and, most recently, Norway -- is more symbolic than real. Nevertheless, we regret to see these governments offering even psychological support to efforts by OPEC governments to influence prices, just as we regret the efforts of OPEC governments over the years to influence prices by manipulating production levels.

I do not offer a price prediction. There are too many uncertainties, including the future course of the Iran/Iraq war. It is clear, however, that there are several factors working to limit OPEC's ability to push prices up sharply in the short run. OPEC nations had a poor record of compliance with production restraint agreements in the past, when their market power was greater than it is today. OPEC's much diminished market share and the acute financial problems of its member nations intensify pressures to produce beyond quotas.

Given transportation lags, the OPEC production surge of the past few months is reaching markets during the time of agreed production restraint. There are large volumes of oil in transit, in floating storage, and in oil company stocks. These high stock levels could be released into the market in the fourth quarter, dampening or overwhelming the price-boosting effect of the usual winter upturn in demand. In view of the size of the current supply overhang, OPEC will be hard-pressed to balance the market at significantly higher prices. On the other hand, the Saudis' demonstrated willingness to drive prices down to enforce OPEC discipline and the general financial problems of the member countries may encourage at least some degree of continued cooperation. The next meeting, scheduled for early October, will be an interesting test of the OPEC nations' ability to come to a more permanent agreement.

D. U.S. Imports

Adjusted for inflation, oil prices have been falling for several years. The recent sharper decline in oil prices has resulted in an increase in imports by the U. S. and other OECD nations. Total net oil imports by the U. S. through August of 1986 rose to an average of just under 5.0 MMBD, about 20 percent higher than the 1985 average for the same period. Much of the increase is due to stockbuilding. While this is above the level of the past few years, it is well below the levels of the mid-1970's. Ten years ago, in 1976, we imported about 7.1 MMBD. For the OECD as a whole, imports in the first half of 1986 were some 8 per cent over the comparable figure for 1985.

A substantial share of our growth in imports has been supplied by Saudi Arabia. Imports of Saudi oil, though up from 83,000 b/d in the first nine months of 1985 to 622,000 b/d in the first half of this year, are still well below levels of the mid-1970's, both in absolute terms and as percentage of our total imports. The major cause in their rapid increase this year is the Saudi move to netback pricing.

The energy security of the U.S. and other Western nations depends not only on the quantity of oil we import, but also on a number of other factors, including:

-- the diversity of our oil suppliers;

-- the availability of excess oil production capacity at home and abroad;

-- the balance in the mix of fuels our economy uses;

-- the availability of alternative fuels, including coal, gas and nuclear;

-- the ability of our energy system to switch between fuels; and

-- the levels of domestic and foreign oil stocks held by governments and companies.

By virtually all these measures, our energy security is stronger today than at the time of the 1979-80 oil shock.

Take, for example, the sources of our oil supplies. The West's sources have diversified with development of the North Sea, and other non-OPEC, non-Persian Gulf production. In the case of the United States, Arab OPEC countries supplied 21.3 percent of our net imports in the first half of this year, up from 11.2 percent in 1985, but well below the one third of our imports that OAPEC supplied ten years ago. Our three principal suppliers, Canada, Mexico and Venezuela, are in the Western Hemisphere, and accounted for over 43 percent of our net oil imports in the first half of the year, compared with about 19 percent ten years ago.

III. ECONOMIC IMPACT OF LOWER OIL PRICES

We recognize the serious problems low prices have caused for our domestic oil industry. The U.S. is still the second largest oil producer in the world. Our oil industry is concentrated in relatively few states, whose economies have been badly hurt by the drop in oil prices.

Notwithstanding the acute adjustments now underway in our energy production sector, lower oil prices continue to provide net benefits to the American economy and the economies of other OECD countries. With oil product prices lower, the American consumer has had more money to spend on other goods. In the second quarter real consumer spending was up 6.5% on an annual basis; spending on durables increased even more. We expect these factors to translate into stronger GNP numbers as the effects of lower oil prices continue to work through the economy.

It must be emphasized that the stimulus of lower oil prices takes time to be fully realized in the economy. Recent GNP figures do not reflect the full positive impacts of lower prices. There are a number of factors that help explain this. The large negative effects of lower prices on the oil sector and on some regions of the nation were felt more quickly than the positive, stimulative effects. In addition, some of the increase in consumer spending initially went for imports, reducing the net effect on measured U.S. GNP. In addition, the drop in OPEC incomes and the severe cutbacks in spending in oil-exporting countries also affected us; oil-exporting nations such as Mexico and Nigeria are major customers of the United States and our trade with them has fallen.

Finally, the GNP numbers for the second quarter provide an incomplete picture of changes in economic well-being because of the way we adjust imports and exports for inflation when we calculate real GNP. The method U.S. authorities use, while legitimate, does not take into account the improvement in our terms of trade attributable to the dramatic decline in the price for imported oil. As a result, our figures tend to obscure the gains in purchasing power arising from lower oil prices. Some nations use alternative methods that incorporate changes in the terms of trade into the computation of the trade sector's contribution to growth; these methods would tend to show higher numbers for recent growth in real income.

IV. POLICY RESPONSE

Events in the oil market during the past year understandably and justifiably have rekindled concerns about our energy security. In talking about our energy security, I include the position of our allies and major trading partners, many of which work closely with us in the International Energy Agency. The security of the United States is inexorably tied to that of Western Europe and Japan, and increasingly to the well-being of the global economy. Concern about increased oil imports must extend to all energy importing countries, and especially to Japan and the nations of Western Europe, most of which are more vulnerable than us. The key question for the industrial democracies is how to reap the benefits of lower, market-determined oil prices, while preserving our energy security.

We need first of all to recognize that in the 1970's the shortages and gasoline lines we experienced in the U.S. were the result in large part of government allocation and controls. These controls have been dismantled. We continue to face the possibility of sharp changes in the market but with controls dismantled, we need no longer be preoccupied with the prospect of gasoline lines.

We do need to continue to monitor the situation very closely. The last decade has taught us that energy markets are full of surprises, both bad and good. The U.S. is carefully studying the impact of lower oil prices. With our strong encouragement and support, the IEA has undertaken a similar effort, which will provide a much better understanding of the effects of lower prices on the economies of member countries, and on our collective energy security.

Experience has shown that adequate oil stocks are the most efficient way to protect Western economies against future supply disruptions. Their availability and effective use in such a situation would calm markets, forestall panic buying and dampen price spikes.

The United States has built a strategic reserve of more than 500 million barrels, approximately one hundred days of current imports. President Reagan's decision in August to reaffirm the 750 million barrel target for the SPR and to continue a fill rate of at least 35,000 barrels a day was an important step in ensuring our energy security.

The President also has stressed the importance of oil stocks to the energy security of our strategic partners. At the Tokyo Summit in May, President Reagan urged his counterparts to increase their nations' stock coverage. Since then the Administration has raised the issue of strategic oil stocks in the capitals of IEA nations, in high-level discussions in Paris and at the IEA's Standing Group on Emergency Preparedness.

IEA nations have long agreed to maintain stocks equivalent to 90 days of imports. All but a few have fully complied with this agreement. While the letter of the IEA agreement is for the most part being met, we believe that too large a share of the stocks of IEA nations constitute minimum operating requirements of oil companies and would not be fully accessible in a crisis. We therefore are urging increases in levels of government-controlled strategic stocks, so that a larger amount of oil would be truly available in a crisis. We are also developing procedures for coordinated IEA stockdraw, including a system for monitoring its effectiveness.

Already we see signs of support. We expect those countries that do not now meet the 90-day requirement to show substantial progress toward doing so by the end of the year. Japan has accelerated the rate at which it is filling its stockpile to 60,000 b/d [from 50,000 b/d]. Germany is considering means of increasing its levels of accessible stocks. Some of the smaller IEA members [Denmark and Switzerland] already have stocks that far exceed current IEA requirements. The Netherlands has plans to increase government-controlled stocks, and Norway has announced creation of a permanent strategic stockpile. While it is not a member of the IEA, France is considering a government-controlled strategic stockpile, as are several IEA members. Finally, Korea recently added substantially to its strategic stockpile.

To be candid, I also must report some resistance to our efforts. Many IEA members face severe budget constraints every bit as difficult as our own. We will need to convince them that larger strategic oil stocks are in their national interest and must be budgeted. Some IEA members believe that demand restraint measures can substitute for strategic oil stocks. Our experience in the United States during the 1970's shows that demand restraint measures, particularly when part of a system of prices and allocation controls, simply do not work. What we urge instead is a concerted effort by other IEA countries to build their stocks to at least the level of protection now enjoyed by the U.S., coupled with development of a coordinated stock drawdown to realize the full benefits to be had from drawing down oil stocks. We will ask countries that propose to use demand restraint to show that the measures they would take would provide collective benefits comparable to those achievable from drawing down oil stocks. We also are disappointed that Sweden is considering selling its government-controlled stocks. Secretary Herrington plans to raise our concerns with Swedish officials during his visit to Stockholm, which began yesterday.

At a time of lower and volatile oil prices, all IEA nations need to do everything they reasonably can to enable their energy industries to compete. The State Department strongly supports the efforts, summarized today by Secretary Martin, that the Administration is making to free our energy industry from the burdens of market-distorting and unnecessary regulations and taxation. We believe that the tax reform bill contributes importantly to this purpose and we look forward to prompt congressional action as well on the administration's proposal for comprehensive deregulation of natural gas. These initiatives are particularly appropriate in the energy market of today. The industry cannot and should not bear unnecessary burdens.

In the International Energy Agency we will be reviewing fiscal and regulatory requirements that other nations impose on their own energy industries and will be strenuously urging abandonment of those that can no longer be justified. Some nations already have taken important steps in this direction. Norway, Canada and Australia each have taken measures to make domestic oil exploration and production more attractive.

Increasing international trade offers another avenue by which Western nations can achieve efficiency gains that will help their energy industries compete more effectively with imported oil. In an era of volatile, lower oil prices, we must give new impetus to efforts to eliminate artificial barriers to energy trade.

We have made progress. Our removal of the ban on crude oil exports from Cook Inlet in Alaska was a useful step. Early this year, Japan liberalized its oil product import system, in response to a decision made at the 1985 IEA Ministerial. Japan is now importing about 42,000 b/d of gasoline, 6.7 percent of its total demand.

A lot of work remains. The Japanese market for oil products is not completely open. Subsidies given to domestic coal producers by members of the European Community and by Japan are good examples of barriers to trade which make no economic sense, hurt American coal producers, and undercut the ability of the industrial democracies to compete with imported oil. We plan an intensified effort during the coming year to seek removal of these subsidies.

We also must avoid imposing new barriers to energy trade. For example, restrictions on the imports of uranium and coal would be inconsistent with the Administration's efforts to establish a free trade regime in energy and would damage specific U.S. interests. In the case of uranium, we would run the risk of losing valued foreign customers for DOE's enrichment services. In the case of coal, restrictions on imports could lead to retaliation that would cause serious damage to U.S. exports.

Above all, we must maintain a steady approach to the energy security problem, succumbing neither to euphoria nor hysteria generated by short run market developments. In many respects, our energy security has improved significantly in recent years. Nevertheless, the concentration of the lion's share of the world's known petroleum reserves in the Persian Gulf region ensures that energy security will continue to be a major concern for the United States and the industrial democracies well into the next century.

V. OTHER PROPOSED SOLUTIONS

A. Oil Import Fee

In the search for a response to the very real problems of our domestic industry, there have been some proposals that are inconsistent with a policy of market-oriented trade, and which would inflict significant damage on the U.S. economy. The oil import fee is the most notable of these ideas. A recent version of this old idea is a variable import fee that would be added to the cost of imported oil and products in order to maintain the price at a predetermined level.

The Administration rejects import fee proposals. An import fee would stifle economic growth, investment and employment; erode the international competitiveness of U.S. industry and expose us to retaliation under the terms of under our international trade agreements.

In April of this year the Energy Information Administration issued a report showing the import fee to have by far the largest negative impact on the economy of various possible energy taxes. The EIA study indicates that over the five-year period from 1986-1990, a $5 per barrel import fee would result in a cumulative loss in real GNP of $67.8 billion, and lowering the GNP growth rate by 0.7 percent compared to the EIA base case. Under the EIA projection, real fixed business investment would be about one percent lower for this period. Moreover, a $5 import fee would trigger offsetting increases in Federal expenditures so that the net effect on the budget deficit would be almost nil.

-- Competitiveness of U.S. Industry. The international competitiveness of U.S. industry is essential if we are to maintain a healthy economy. An oil import fee would erode competitiveness by raising the domestic prices of all energy products. Higher energy costs would undercut the ability of our industries to compete with foreign products, both at home and abroad. American agriculture, for example, would be hit by increased costs for tractor fuel, fertilizers, crop drying and transportation to markets, and would be rendered less competitive in important export markets. Industries such as petrochemicals and plastics would be seriously affected; increasing petroleum feedstock costs would undermine their competitiveness at a time when they already face rising imports from new low-cost plants in oil-exporting countries. Increased costs for the petrochemical and plastic industries also could result in higher costs and decreased international competitiveness for other industries, such as automobiles, which are significant consumers of petroleum-based products.

-- GATT and Other Trade Obligations. An import fee would expose U.S. exports to retaliation under the terms of agreements reached under the General Agreement on Trade and Tariffs [GATT]. Under the GATT the U.S. has agreed to bind its tariffs on most petroleum products at current levels in return for trade concessions from other countries. Increasing the duties on those products could entitle GATT members that suffer demonstrable injury to compensation or retaliation against U.S. exports.

-- Bilateral Foreign Relations. As the EIA analysis shows an import fee would reduce oil import levels somewhat. This reduction, however, would affect our reliable suppliers as well as suppliers from other more insecure regions. The governments of our three largest suppliers, Canada, Mexico, and Venezuela, already have expressed strong concern about an oil import fee. Exempting these neighbors, however, would discriminate against other major suppliers, such as the United Kingdom and Nigeria. The UK steadfastly has refused to cooperate with OPEC on fixing prices.

-- IEA Commitments to Free Trade in Refined Products. At an IEA Ministerial meeting in July 1985, the U.S. successfully pushed for communique language calling for open, market-based trade in oil products. Due to this agreement, at least one country, Japan, has begun to import products, including gasoline, kerosene, and diesel fuel, which it formerly did not import. Imposition of an import fee on products would be a retreat from our commitment to the agreement and might well trigger similar actions by our IEA partners seeking to shelter their own domestic oil refining industries.

B. Producer-Consumer Dialogue

Multilateral negotiations between the governments of oil importing countries and organizations such as OPEC would also be an undesirable response to the current oil market. The USG opposes this kind of "producer-consumer dialogue" because such talks inevitably would drift into discussion of pricing and production levels, matters best left to the market place. Furthermore, when such talks prove ineffective, they can have a negative effect on our bilateral relations with producing countries by drawing out our differences over the proper role of market forces. We believe governmental attempts to set international energy prices are unjustified and will lead to greater market instability. This is true regardless of whether the attempts are made by producer country governments, consumer country governments, or the governments of both acting together.

CONCLUSION

Market forces can best determine energy prices, production levels and trade. When they are allowed to operate freely, they insure efficient allocation of energy resources at the lowest cost to the consumer. Government intervention in the pricing of oil or other energy sources does more harm than good. There is a stong consensus in the IEA against such intervention, and with the possible exception of Norway the consensus appears to be holding.

The governments of IEA nations do have an essential role to play in ensuring our energy security. Ample stocks provide the best protection against the kind of supply disruptions that . brought about oil price shocks and economic damage during the seventies. We therefore are redoubling our efforts to increase our strategic oil stocks.

Recognizing the need for competitive domestic energy industries, IEA nations also need to remove unnecessary fiscal and regulatory obstacles to domestic energy production and free up trade in energy products and services. In a recent speech at Harvard's 350th Anniversary, Secretary Shultz reminded his audience that the prosperity of the United States depends on an open trading system. In the energy arena, our push for freer international markets will contribute not only to our prosperity, but also to our energy security.

The CHAIRMAN. Thank you.

Senator Bingaman.

Senator BINGAMAN. Thank you, Mr. Chairman.

Let me just say that my own perception is there is a tremendous gap between the rhetoric of the administration on this issue and the reality of your policy.

For the President to say that he is totally committed, wholeheartedly committed to a strong domestic energy industry and determined that America will never again be captive to foreign oil cartels and then propose virtually nothing to accomplish that seems to me to be somewhat difficult to understand.

Let me just ask a few specific questions.

You say in your statement, Secretary Martin, that one of the things we are committed to is maintaining the momentum toward alternatives, economic alternatives to oil, including conservation.

My understanding is that year after year, since I've been here in the Congress, the administration has requested major cuts in funding for development of alternative energy sources.

Is that right?

Mr. MARTIN. Yes, Senator.

Senator BINGAMAN. And year after year, the administration has requested major cuts in funding for conservation or promotion of conservation.

Is that correct also?

Mr. MARTIN. Conservation remains a high priority. But how you get there we feel you can do with less Federal funds, and I'd like to go into that.

Senator BINGAMAN. What did you ask for in the way of funding this year to encourage conservation?

Mr. MARTIN. I think it's over $100 million, but I'd like to check that for the record.

Senator BINGAMAN. I'd be surprised if it were $100 million.

Mr. MARTIN. I'd be glad to submit that for the record.

[The information referred to follows:]

The fiscal year 1987 budget request for energy Conservation was $76.2 million.

Senator BINGAMAN. I'd be glad to see how that figure has varied over the last several years, because my impression is that you have dramatically cut the amount of Federal money going into encouraging conservation.

Mr. MARTIN. The assumption there, Senator, is that Federal funds poured into something get results. We think we've gotten results and we can explain why we've gotten results but Federal money is not a direct link to getting results in this field, we believe.

Senator BINGAMAN. Haven't results in conservation primarily been from increased prices?

Mr. MARTIN. I think that is a very good example of market forces working. Yes, sir.

Senator BINGAMAN. Now we have decreased prices. So conservation would not be expected to be as great.

Isn't that correct?

Mr. MARTIN. Well, I don't know.

Let me explain why.

I think one of the major determinants of conservation is capital stock turnover. In the case of automobiles, we have a 10-year life in an automobile. We are now replacing 1976 models. So I think in this particular case, we are going to continue to see efficiencies gained each and every year those automobiles turn over.

Let's take industrial plant. Again, here you have a 30-year leadtime usually in replacing capital plant. Technologies that are now available on the market, industries are buying. But they are buying because they remain more competitive vis-a-vis other domestic competitors and internationally.

Also, let's take homes, commercial entities. I have been very impressed recently with some of the work I've heard out at the Berkeley Laboratories, which are DOE sponsored—we've put a lot of money into this—in increasing the efficiency of light bulbs, for example.

Again, we have light bulbs on the market today——

Senator BINGAMAN. Let me just cut you a little bit short and say you believe that the rising prices helped conservation and the falling prices will not hurt it?

Mr. MARTIN. I think that the American public is mindful of the benefits of conservation and they will continue to make these investments.

I think that we do have a carefully crafted Federal program to help promising long-term technologies, which might not be commercialized. I commend to you the broader problem of the national deficit and cutting back where we can. I think that the conservation programs have been carefully analyzed and reviewed.

We have said publicly that we note the importance of conservation. I said in my testimony that we don't use, in Btu's more energy today than we did in 1974. I think a lot of that is due to the market.

I think there is momentum in the market still, I guess is what I am saying, and if we have to have physical restraints and have to be more careful with our funding, we might lose a very small percentage of that gain. But I still think the market is doing pretty well.

Senator BINGAMAN. You cite your commitment to continue filling the strategic petroleum reserve. My recollection was that you asked for a moratorium on filling the strategic petroleum reserve in the budget submitted to Congress this year.

Am I wrong?

Mr. MARTIN. You are correct in that.

The President has now decided, in light of the situation in the oil market, that we should continue filling the strategic petroleum reserve, benefitting from the lower oil prices as well as the increased national security.

This was announced about a month ago, Senator.

I might add that we have also recently tried to emphasize the importance of buying from domestic producers, as long as that oil is at competitive prices with international prices.

Senator BINGAMAN. How many years in a row has the administration asked us to keep a moratorium on the fill of the strategic petroleum reserve?

Mr. MARTIN. Well, I think we should look at where we began. We began at 100 million barrels. We got to 500 million in 5 years at the urging of Congress as well as the administration.

At some point in time you have to say what is enough given the fiscal restraints we view.

Senator BINGAMAN. Would you answer my question.

Mr. MARTIN. We felt earlier this year, before we had the price collapse, that 500 million barrels was plenty of oil and a lot of days of imports.

Again, we like the stocks, we like the SPR. We face budget problems.

In light of the present oil situation, this was actively discussed at the Cabinet level and the President decided to continue the fill and reaffirm the 750 million figure.

So I think we are adjusting to market realities, Senator, and we think it is very important.

Senator BINGAMAN. Did you answer my question?

Do you remember my question?

Mr. MARTIN. How many years did we support a moratorium?

Senator BINGAMAN. Yes.

Mr. MARTIN. Well, I know we did this year. But I recall that we also filled at about 200,000 barrels a day for many years. We then filled at 140,000 barrels a day for many years. And then we asked for a moratorium when we got to 500,000.

Senator BINGAMAN. And now you are committed to filling it at 35,000 barrels a day, which is about 10 percent of the level at which you were filling it in 1981.

Isn't that correct?

Mr. MARTIN. That's right—and we had 100 million barrels a day in 1981, too. We have 500 million today.

You tell me where we can get the money and we will look seriously at it.

I don't think we disagree in principle, here. I really don't. I think the President is strongly committed at a time of budget constraint to continue filling, and that shows the importance we attach to it, Senator.

Senator BINGAMAN. Explain to me your proposal to sell the naval petroleum reserve.

How does that fit into your commitment?

Mr. MARTIN. This is part of our broader effort of course, to privatize those areas where we believe the government can leave the business of business to business.

This has been a longstanding reserve that we have used. We have gained quite a bit of revenue from it over the years. The issue is why are we the ones who are managing and selling it when it's basically an oil company reserve.

We believe that the original intention of the naval petroleum reserve was to allow for a strategic reserve. We recognize that it can produce about 80,000 to 110,000 barrels a day. We like the idea of a SPR better, where you can get 2 to 2½ million barrels a day out of the ground. So we think the need for Elk Hills has been perhaps overcome by the fact that we have the strategic petroleum reserve now.

Let me emphasize, however, that it isn't going to be a fire sale. We want to get a fair price for this which will return some money, give a fair return to the taxpayer.

Senator BINGAMAN. Isn't it unusual to try to sell that at the time that oil is the lowest it has been in, what, ten years?

Mr. MARTIN. As I said, I think we are going to get a fair price for that. If we do not get a fair price, we are not going to sell.

Senator BINGAMAN. Let me just ask this.

You say that you are committed to energy security, but you are also committed to allowing the market to work.

Is there any built in conflict that you see between those two? I mean, as we become more and more dependent upon foreign sources and as we shut in more and more domestic production, is there a point at which the administration would feel that some government action to interfere with the market would be appropriate in order to guarantee energy security?

Mr. MARTIN. It's the question of the day.

Having spent 4 years in the National Security Council, where my last job was as Executive Secretary of the National Security Council, I have a strong sense of national security needs.

On the other extreme, a lot of times people who can't make it in the marketplace cheapen the national security argument.

I like to find areas where national security and market forces reinforce each other.

For example, if we do get into a situation of 50 percent dependence on the Persian Gulf again, we are right back in the hands we were in 1979, where the cartel could jerk our chain and triple the price in 5 months.

That is the sort of situation which we believe goes against both our economic competitiveness as well as our national security.

So, I think the key is diversification, and that is a good economic principle. Not becoming dependent on a monopoly is a good economic principle.

So, I think in that case, from a market forces point of view, you don't want to become dependent on the Persian Gulf.

There is a very good national security concern, too, because as long as 50 percent of the world's oil comes from that region, you have to protect it.

I was with the President and Cap Weinberger when we reviewed the situation in light of the Iran-Iraq hostilities a few years ago. After seeing the analysis of what the oil market meant to the broader economy, the President turned to Cap Weinberger and he said, "Cap, keep the Straits open."

Now that is a situation where the President is going to commit military action to protect those oil reserves.

I would like to see a time in the 1990's, Senator, where from that region we are not getting 50 percent of our oil, but we're getting a lower percentage.

So, what I'm saying to you is these are both very, very high priorities in this administration.

Senator BINGAMAN. Let me see if I understand.

Your idea of maintaining energy security is to maintain the military capability to keep the straits open?

Mr. MARTIN. No. No, I didn't say that.

My idea of energy security is to keep the percentage of dependence on that region relatively low and diversify, not only from other oil resources, but through coal and nuclear. That I think is the challenge we have before us.

Senator BINGAMAN. If we become 50-percent dependent upon foreign oil, is that sort of a trigger point at which the administration would feel that some kind of interference with the market and with the free inflow of oil should be considered? Or is there no trigger point?

Mr. MARTIN. I think, looking at it, you are saying 50-percent dependent, just U.S. imports. I say that you have to look at the international situation.

We could be 50-percent dependent and the Japanese less and the European less, so that the percentage of Persian Gulf oil would not be that high. In that case, I would not say you had an energy security problem.

The issue becomes what do our imports, added to the Europeans, and the Japanese, and the Third World demand, what is the aggregate number?

Senator BINGAMAN. So, our imports could get quite a bit above 50-percent before it became a national security problem, in your view?

Mr. MARTIN. Well, I think Poindexter has described the national security argument in his letter to the conferees.

The national security argument is the percentage dependence on the Persian Gulf.

Senator BINGAMAN. What percentage—I'm sorry?

Mr. MARTIN. It is the percentage—dependent on the percentage. I would say, my judgment is, if 50 percent of your oil is coming from that region in the aggregate, you know, I would hope that that would not occur, and the challenge is to prevent that percentage from creeping up and up and up until the mid-1990's that we get into that situation.

That is why we need domestic action as well as international action. That is why we need action to preserve a viable industry here, in the oil industry as well as in coal and nuclear plants abroad. That is why we need stock programs in this country, as well as stocking programs in Europe and Japan. It is so integrated that we need to look at this from both what we do domestically and what we do internationally.

Just looking domestically and saying 50 percent of the trigger does not do it.

Senator BINGAMAN. Some of us have supported the idea of an oil import fee here in Congress to try to maintain a viable domestic energy industry, and particularly so since the price of oil has dropped.

Is there any price level for oil at which you, the administration, would consider it appropriate to go forward with some kind of import restrictions?

It went down to $10 and your policy did not change. If it went to $5, would it change? Is there any level at which your policy changes?

Mr. MARTIN. I do not think, Senator, that we would like to speculate on that.

I will note that, if you ask bankers, our New York bankers, what is the impact of an oil import fee on the industry at this time, they will note that it may help some stripper wells, which are facing problems. They will also note that for the exploration, the new exploration that is so vital to keeping production up over the coming years, you need much higher oil prices than whatever either a $5 or even a $10 fee will give you.

So, I do not think it is useful to speculate at this time.

We have been opposed to an oil import fee, as Mr. Larson has indicated. We recognize that some would argue that it would help the industry in the short term. We also recognize that it benefits some revenue generation.

On the other hand, it cuts our competitiveness, raises prices to consumers, and we think, in looking at this question, that it is just not the right way to go at this time.

Senator BINGAMAN. Let me just hit one more question and then I will yield, Mr. Chairman.

I would like your reaction to this.

I have the impression that the economic benefits which the administration sees in this drop in oil prices are given greater significance or a higher priority than whatever disadvantages this has for the domestic oil and gas industry; and that basically what we are seeing is in order to try to salvage a domestic oil and gas industry, we would have to reduce the economic benefits that the administration feels we are gaining from these low oil prices; and, consequently, the administration is not willing to do that.

Is that a fair characterization of what is happening?

Mr. MARTIN. Well, I don't like to look at it in those terms, Senator.

I like to look at how is the public at large best off in this situation.

My view is that over the longer term, if we become more and more dependent on the OPEC countries, and, particularly the Persian Gulf again, the consumer is going to be in a situation where these countries can jerk the chain and raise his prices.

I would hope that that time never becomes a reality. It behooves us to take a look at what is right for the public at large.

Right now, I think the public benefits through the lower oil prices. At a distant time in the future, where these countries can again raise the price, I think the consumer would be hurt.

It is a very, very fine balance here.

It is something we are going to be struggling with for many weeks to come.

Senator BINGAMAN. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator.

A statement was made a moment ago, and I have been going through my figures trying to figure out how you got to the conclusion that about half of the increased imports are stock building.

If I look at it, we are importing about 50 million barrels a month more than we were, and stocks have risen about 3.6 million barrels in total over the last month.

Mr. MARTIN. May I ask Mr. Stanley-Miller to address the numbers on this, Senator?

The CHAIRMAN. Certainly.

Mr. MARTIN. He is from the Department of Energy.

Mr. STANLEY-MILLER. Without getting into the specifics, I think the numbers we looked at——

Senator FORD. Would you pull the microphone up so that we can hear you better, please.

Mr. STANLEY-MILLER. For the first 261 days of 1986 net imports of crude and petroleum products were up about 800,000 barrels a day over the previous same period in 1985. Consumption in that period was only up about 400,000 barrels a day.

The CHAIRMAN. You are looking at an 8-month average?

Mr. STANLEY-MILLER. Yes. That may be the difference in the numbers.

You perhaps are comparing just a month, well, 1-month statistic.

The CHAIRMAN. I was looking at the most recent total month that we have, which is the month of June, in which our imports were up 50 million barrels.

Mr. STANLEY-MILLER. We don't have good consumption data, I believe, for monthly statistics.

The CHAIRMAN. But we do have statistics on stocks, on 4-week averages.

Mr. STANLEY-MILLER. If you look, in the data there is a large category called "unaccounted for crude oil" of about 252,000 barrels a day. It is just very difficult to fine tune statistics on a monthly basis.

I think it is better to use averages over several months time.

The CHAIRMAN. This is a 4-week average.

Mr. STANLEY-MILLER. Right.

The CHAIRMAN. I look at percent change.

Yes, there is stock building, obviously, during a period of time when prices are down. You also have to make seasonal adjustments.

Mr. STANLEY-MILLER. Right.

The CHAIRMAN. Typically, you have an increased consumption of refinery runs as you move toward gasoline. Gasoline stocks move up in anticipation of the summer season at this time of year. You have already gone through the period when they have completed the building of home heating oils, in anticipation of the fall markets. You make adjustments for that on a seasonal basis to kind of wipe out those variations of both consumption and product run.

Mr. STANLEY-MILLER. If you want, for the record we can submit a detailed assessment of the monthly data versus the 6-month average.

The CHAIRMAN. If you would do so, I would appreciate it.

Just from my looking at IEA information reports, I find it very difficult to support the statement that half of the increase has gone into stocks. That does not seem to me to be apparent from the figures.

Mr. STANLEY-MILLER. OK

Let me do that for you, Senator.

The CHAIRMAN. Thank you.

Could you provide for the record, too, on a State-by-State basis, at least with respect to the major petroleum-producing States, what their regulations are or have been with respect to well-plugging deadlines and what they have done to alleviate that problem in the time of downturn.

[The information referred to follows:]

OIL DATA FOR 1985, FIRST 261 DAYS OF 1986 AND FOUR WEEK PERIOD ENDING 9/19/86

ITEM	PERIOD (THOUSAND BARRELS PER DAY) 1985	First 261 Days of 1986	Four Week Period Ending 9/19/86
U.S. Oil Production			
Crude Oil	8,971	8,822	8,684
Natural Gas Liquids	1,609	1,609	1,555
U.S. Oil Consumption	15,726	16,016	16,135
Net Imports of Crude and Products	4,286	5,048	6,196
Stock Withdrawals[1]			
Crude Oil (excluding SPR)	67	-41	48
Petroleum Products	153	-240	-1,113
Crude Oil (including SPR)	-50	-89	9

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[1] A negative number indicates an increase in stocks and a positive number indicates decrease.

STATES HAVE ALSO TAKEN ACTION TO PROVIDE RELIEF TO DOMESTIC OIL PRODUCERS

ALABAMA -- The "privilege tax" on Enhanced Oil Recovery (EOR) production was reduced from 8 percent to 4 percent in 1985.

KANSAS -- The Kansas Corporation Commission is considering reduction of electricity rates for oil and gas leases, cutting costs by 15 to 20 percent and thereby postponing the shut-in of some marginal production.

LOUISIANA -- Production from new oil and gas wells (including some wildcats) has been made exempt from the 6 percent state severance tax until January 1, 1990, or until the price of West Texas Intermediate Crude oil exceeds $29.50 per barrel. This is expected to lead to the drilling of more than 200 new wells and the creation of approximately 10,000 new jobs in Louisiana.

MISSISSIPPI -- The severance tax for carbon dioxide projects was reduced in 1984 from 6 percent to 3 percent, as an incentive to EOR production. Producer of CO_2 for EOR projects are totally exempt from a severance tax; projects using CO_2 for EOR projects pay a 3 percent severance tax.

MONTANA -- Severance tax on oil was reduced from 6 percent to 5 percent for conventional oil and from 5 percent to 2.5 percent on new incremental tertiary production in 1984. The "Net Proceeds Tax" was restructured in 1985 to allow relief for production from discoveries made after July 1, 1985.

NEW MEXICO -- The state is participating in a major study to evaluate the benefits from a tertiary recovery incentive program. This study could serve as a model for nationwide evaluation of Enhanced Oil Recovery incentives.

OKLAHOMA -- The Oklahoma Corporation Commission reduced electricity rates selectively for many oil and gas leases, thus reducing the operating costs of marginal wells and postponing the need to shut in production. The plugging deadline for inactive wells has been extended from 90 days to 2 years.

TEXAS -- The Texas Railroad Commission changed its well-plugging rules to allow inactive wells to remain unplugged for up to 1 year, rather than 90 days.

The **Chairman**. I look at your statement that indicates what you would expect would happen with respect to the loss of production from stripper wells at various prices.

I note that at $10 a barrel, we would lose half of the stripper well production.

Now, the stripper well production is nearly 15 percent of our total, and losing half of it, again, at $10 a barrel, you predict we will lose 7 percent of our total production, which is a significant increase in our dependence.

Senator Bingaman asked a very legitimate question about the administration's position with respect to the strategic petroleum reserve. There is not any doubt, and I think we might as well be candid about it, that the administration has been much less supportive of the strategic petroleum reserve than has the Congress.

Much of the success we have had in building those stocks is a result of the congressional action that has mandated things that the administration did not want. I think we should lay that out on the table.

But I do that, also, because I want to commend Secretary Herrington for having responded to current conditions, changed his mind with respect to that, and urged the administration to change its mind with respect to the strategic petroleum reserve. And I want to commend the President for having accepted that advice and given full support to the 750-million-barrel reserve.

I am at least as mindful as anyone around here of the budgetary dichotomy that this forces on us. It is extremely difficult for us to find the money.

I know because I have to try to find it in the appropriations process.

So we are balancing what we can do with the strategic petroleum reserve. But we believe that the targets that have been established, which are now supported by the administration, are minimal targets for the strategic petroleum reserve. Probably they are also the maximum that we can find in terms of the budgetary pressures.

It is a difficult balance. I know that many in this Congress will continue to urge that we find additional money. But your response a moment ago I think was right in one respect, and may help us find the money. That is you would be glad to spend it if we can find it.

There are some who say that we ought to raise taxes in order to finance all of this spending. That is a fundamental political argument going on throughout the Congress and throughout the country today.

And maybe that is the right answer? I don't share it. But some believe that that is the right answer and they would, cheerfully, raise the taxes. I'm not sure they would cheerfully pay them, but they would cheerfully raise them in order to finance the expanded spending, or to avoid a decrease in spending in the Federal budget.

Mr. Larson, I interrupted you a moment ago to say that, because I had smiled, I was afraid my involuntary reaction might have puzzled some in the audience as to why was I smiling at that a particular time, when you said that there were promising results out there.

You pointed to some real changes in the attitudes of some of our economic and security partners in the world in building their stocks.

Our problem is primarily European, is it not?

Mr. LARSON. That is correct.

The CHAIRMAN. They have budgetary crises, too.

Are we really going to get increases on the Continent?

Mr. LARSON. Well, we are going to do everything in our power to get increases.

We got the issue introduced onto the summit agenda. The President then raised it at the summit itself. Under Secretary Wallace, on the heels of the summit, made a trip to Europe in which he impressed a number of leaders there on the importance we attach to this.

Now we are at the work of getting this issue worked through the International Energy Agency. We also have had a number of informal consultations with some of the key European countries.

What we sense is that there is movement. Some of the countries are reassessing their positions.

I noted in my testimony that the Germans have given some very concrete indications that they are considering ways of increasing the level of accessible stocks in their country.

The CHAIRMAN. That puts it two steps away from realization.

There is concrete evidence that they are considering doing something.

Mr. LARSON. Oh, yes.

The CHAIRMAN. It's only when you get around to doing something, not considering it, that is concrete evidence.

Mr. LARSON. That's right.

What we have established, therefore, is a work program in the International Energy Agency that will begin at the end of this month, when the IEA governing board will meet to consider what we can do over the course of the next few months, before the end of the year, to hammer out an agreement, to do the analysis that is required to hammer out an agreement and then to hammer out an agreement on stocks.

We propose also to keep the pressure on in the summit context because that is a higher level group and it is also a group where you have officials involved who have to make tradeoffs between budgetary considerations and energy security considerations.

So, while we want to work it in the energy part of other countries' governments, we are going to work it in this broader context as well.

The CHAIRMAN. Well, it is going to be very difficult to achieve. It has been very difficult, and I think it is going to require the best efforts of everyone.

I am pleased to know that the President, in departing from the economic summit, made reference to what a mean bunch of junkyard dogs there are in the Congress. This is because many of us feel very strongly that the American taxpayer cannot pay the whole bill and the American consumer should not accept the full burden of international security arrangements, of which this is a very important component.

Let me read a statement and ask if you agree.

> If stability in the oil market is reached now or in a year or two, it will only be because a few men in the oil exporting countries, both in OPEC and outside it, acting exclusively in their own interest, have decided that the current chaos must end.

Mr. Larson. Well, let me comment on that, and then you can tell me if you think my comment isn't responsive to the question.

Senator Ford. Yes or no would be awfully easy to say. [General laughter.]

Mr. Larson. I think the situation that we have in the oil market is one where the OPEC countries have a greatly diminished capacity to influence prices. They have painted themselves into a corner where they have had a shrinking, greatly shrinking, share of the international oil market.

And so, the steps that were taken in 1985 are understandable with that background in mind.

They have had some success in the last few weeks in implementing a temporary agreement to restrain production, and that agreement has not only stabilized, well, pushed prices back up by about $4 a barrel, and they have been essentially stable since the agreement was announced.

The Chairman. Let me interrupt because I am afraid your answer indicates you didn't hear all of the statement.

Mr. Larson. All right.

The Chairman. Let me read it again. I am not going to paraphrase it or explain it because I want you to respond to the statement in its entirety.

> If stability in the oil market is reached now or in a year or two, it will only be because a few men in the oil exporting countries, both in OPEC and outside it, acting exclusively in their own interest, have decided that the current chaos must end.

Mr. Larson. I don't think that the OPEC countries have it in their power to stabilize prices. They have tried to do that over the years.

The Chairman. Again, you keep referring to OPEC, and the statement says "both in OPEC and outside it."

Mr. Larson. Yes. I guess one would ask who the other few men outside OPEC are.

The Chairman. OK. You think, then, that the ones outside OPEC are irrelevant?

Mr. Larson. Well, I just don't know who those few men would be who would have that sort of power to influence oil prices and production.

The Chairman. Well, I have been to London and talked to Royal Dutch Shell, as an example.

Mr. Larson. Well, what we see is that there has not been significant cooperation with OPEC.

The Chairman. OK. I don't mean to interrupt your answer. I just wanted to make sure that you had understood that this statement did not refer exclusively to OPEC, and your answer seemed to.

Mr. Larson. I was headed in that direction. Thank you for the clarification.

The British have not cooperated in the efforts of OPEC to set prices or to restrain production to support prices. There have been a few countries around the world that have offered symbolic support for the OPEC agreement. Our assessment is that the support is purely symbolic and that the effect that it has is essentially insignificant.

So, if the question is are there groups out in the world who could combine with OPEC to try to stabilize prices, my answer would be that I would disagree with the statement.

The CHAIRMAN. What is going to bring about stability, other than within the bounds of this statement?

Mr. LARSON. I think stability will come gradually over time, as the power of the OPEC nations is continually diminished and we ourselves move toward more market oriented policies.

I feel that the instability that we have seen over the last decade or more has been in substantial part caused by government interference with the market, if you will—interference on the one hand by the OPEC producers themselves, who manipulated their oil output levels. To some extent we contributed to the problem by maintaining oil price controls and allocation systems that frustrated the market. We continue to have a lot of unfinished work in deregulating our own domestic energy markets.

Perhaps I could just add one sentence to the debate earlier about energy security and free markets.

To a very substantial extent, I think free market policies are very compatible with and supportive of our national energy security objectives. The more we can do at home to make our markets more flexible and responsive, the less vulnerable we will be to manipulative actions in the international markets.

The CHAIRMAN. I will let that pass for a moment because I am really concerned. First of all, I agree that free markets are best. I also agree that free markets internationally may bring about economic benefits to all of the peoples of the world. I do not disagree with that ideal.

I question whether we have free markets. They are manipulated by governments and others in a whole variety of different ways.

I am very much concerned about energy as well as critical materials; our dependence upon a free market, without a look at our security requirements, can lead us to dependence upon areas of the world that are politically unfriendly and unstable and can lead to dramatic dangers to the security of this country.

I have said it so often that I hate to repeat it, but I think it has to be repeated.

I am old enough to remember—and that, I guess, is a penalty of growing older, one of several penalties—I remember what happened after Pearl Harbor.

Everybody ought to go back and reread that history. It ought to be required of every school teacher in this country that they understand that, and that they teach it.

We did not have the military capacity to defeat the Axis at the time of Pearl Harbor. We simply did not.

If we had not had an industrial base that could be converted to war production, we would not have won World War II. And there was a miracle of production that occurred in a few months, following Pearl Harbor, when we finally decided to mobilize for a war that we were then in.

The conversion of a civilian industrial capacity to the tools of war was the reason we won World War II. We had the time to convert it. We had the time and we had the capacity.

Now, if you do not have the capacity and you do not have the time, the Nation cannot be secure. It is a fundamental security requirement for our society, and a free market does not necessarily produce that.

I think we have to direct ourselves in tax, economic, and diplomatic policies, to those things which are necessary to maintain the essentials of the security of our country. You do not get it just by building more ships and airplanes now, in peace time. You cannot get security simply by building more nuclear bombs.

Some of our expenditure and some of our attention needs to be devoted to maintaining the production capacity which is absolutely essential in a modern society in time of war.

I say that again because I believe the best defense against a war is to remain strong enough to deter aggression by others. If they find us exposed, they are more likely to take risks that they would not otherwise take.

But, let me move from that.

Senator BUMPERS. Before you do, let me say, Mr. Chairman, that I concur in everything you just said. I thought that was a very fine statement.

Senator FORD. And I'm going to go back and read about Pearl Harbor again at the end of this.

The CHAIRMAN. Thank you. It really is worth the excursion. And we here perhaps remember it better.

I think there are an awful lot of people who have forgotten and an awful lot who did not experience it, and who do not really understand what did happen in that period.

It was a remarkable achievement of people who wanted to remain free and who were able to because we were in a very strong economy.

Saudi Arabia's Oil Minister, Yamani, has stated that he believes that price stability can only be attained through long-term free market equilibrium.

He went further to say that, in his judgment, this could be achieved after a 6-year transition period, or by 1992, at an average price of $20 per barrel.

I want to ask both of you do you agree with his conclusion when market stability will occur and his estimate of the required price? Mr. Larson.

Mr. LARSON. I am coming back to the energy business after a lapse of a few years. When I was leaving, the Saudi Oil Minister had the position—then oil prices were in the high 30's—that oil prices would and should rise from that level by inflation plus the average growth rate of the OECD each year.

That is not a comment meant to cast aspersions on his forecasting ability. But it just goes to show that these are not things that can be very accurately forecast, even by people like him, who ought to want to know.

I do not know what the oil market is going to do over that period. I would say that the consensus of opinion is that the price range that he talks about over the next 6 years is a reasonable one.

I mean it is a reasonable one in the sense that it is perhaps an average or a consensus.

The CHAIRMAN. I assume that he is talking about a gradual rise in price over this period of time to about that level by 1992. I'm not certain that that is what he said, but I believe it is.

Mr. LARSON. That seems to be what he implied in his remarks.

The CHAIRMAN. All right.

And you, in general, whether you can say that that is right or wrong, can report that that is the consensus of thinking or the average of thinking?

Mr. LARSON. Well, "consensus" might be a little bit too strong a word. I would say that it is considered to be a plausible view and maybe a middle of the road view.

The CHAIRMAN. OK. There are a lot of plausible views that could be held.

Mr. LARSON. That's why I say a middle of the road view among extremes.

The CHAIRMAN. Thank you.

Mr. Martin.

Mr. MARTIN. I would say that it is a self-serving view, and I will tell you why.

Let's take $20, assume the price is $20. My next question is OK, what is that going to stimulate in the way of production from the United States, Canada, Mexico, Egypt. If $20 is not sufficient to bring on some of the more frontier regions of this country or the higher priced North Sea area, then, indeed, you could find yourself with OPEC, because that is where the surplus capacity is, creeping up and supplying most of the world's oil.

Now, remember, back in 1979, when the price was $12 and we had that little upset with the Iranian revolution, the next thing you knew, the OPEC countries tripled the price.

Whenever I hear an oil minister from an OPEC country talk about stability and this kind of thing, I always remember that, because I think they will take it to their economic advantage any time they have a greater share of the market and can control that cartel. They'll stick it to us.

So, $20 for Mr. Yamani could turn into $40 if he had the market share.

So, I don't know. When prices are down, they want to talk about stability. But when they tripled the price in 1979, they were not talking to anybody. They were just raising the price.

The CHAIRMAN. Are you suggesting, then, that he does not believe that that is what will happen, or that you do not believe that is what will happen?

Mr. MARTIN. Well, I have been so wrong in every forecast that I have ever made, Senator, that I have now gotten out of the business of forecasting. I'm saying that this is what my forecast says and we presented it here, but there are a lot of things that can affect that. What will happen with the Iran-Iraq war? What will happen to the development of alternatives? What will happen to economic growth?

I think there are so many variables which affect this situation outside of just this issue of price that I would really hesitate to make a prediction on it.

But I will say when they get the market share, then you can forget about the market working again. If they get the opportunity, they will increase, and that I think is a problem.

The CHAIRMAN. Well, I do not think it is an implausible thesis on his part or just self-serving.

It certainly is self-serving, but I made a similar statement about what I would expect the Saudis might wish to do. They can get whatever market share they want for the next 30 years at $20 a barrel. If they go dramatically above that, as we found, when they reached over $30 a barrel, they began to lose market share.

Now, what is their objective? Their objective is to do whatever is best for them.

What is best for them? It is maintaining a market share at a price that maximizes their return on their product which they sell and their competitive position in the world.

Twenty dollars a barrel does that pretty well, doesn't it?

Who is going to invest in the frontier areas of this country, who is going to invest in expensive conservation, who is going to develop alternative fuels at $20 a barrel if there are no other constraints in the marketplace?

If I recall correctly, 20 years ago, the Saudis had about 610 producing oil wells. They today have 700 producible oil wells and have around 600 producing. This is a way of saying they really have not invested in their frontiers. They have had no need to. There has been no exploration or development to develop and dramatically increase the production capacity in Saudi Arabia. They have not had to.

Theirs is still the best investment prospect in the world, isn't it? And it is still a very good investment prospect at $20 a barrel, isn't it?

And, if it is the best in the world at that price, why would anybody invest somewhere else? And, can they not maintain market dominance for 30 years at $20 a barrel?

Those are not rhetorical questions simply. I think it is true.

If I were to look at what their objective might be, I might come to that conclusion. And I would also say that they have the apparent capacity to inflict that scenario on the world if that is the proper term.

It seems to me that they have the capacity to make certain that the price does not rise above $20 a barrel, and they will completely stifle the rest of the industry around the world. Maybe "completely" is not right, but they can stifle them to whatever extent they feel necessary in order to maintain whatever market share they decide.

Isn't that correct?

Mr. MARTIN. Well, certainly, as our testimony demonstrates, they have the surplus capacity.

The CHAIRMAN. Yes.

Senator Ford.

Senator FORD. If I didn't feel so bad, Mr. Chairman, with this cold, I'd show them what a "junkyard dog" was this morning. [General laughter.]

You know, the winds are blowing, and the chairman is correct. We watch you fellows make policy and we try our damndest to do something else and then we are accused of being "junkyard dogs." I hope it is because we indicate that we are tough and we are going to stay on our line.

But you have rejected every alternative in the books to say that the free market is best for the public at large, or that the public is better off with a free market.

What is the percentage—I was not here—of imports now that we use, a percentage of our daily use of imported energy?

The CHAIRMAN. The Senator noted the numbers. We have gone from 37 percent up to 40 percent in the last year.

Senator FORD. OK.

So, we are moving in the wrong direction, aren't we, as it relates to domestic production versus imports? Instead of increasing our domestic production, it is decreasing, and our average daily use of domestic oil has gone down some.

Mr. MARTIN. I would say to the extent this development hurts, domestic oil production rises, coupled with other activities internationally, with maybe rising demand in Europe and falling production in the North Sea, yes. But it is not just us in this.

Senator FORD. Well, what is the difference between them and us?

Mr. Chairman, it just bothers me. We are always taking care of them and not worrying about us. We ought to have a little self-interest here once in a while, and I think that is what we have lost in the free market, based on energy supply.

Mr. MARTIN. I made the point earlier, Senator, that it is important that the Europeans and Japanese continue to diversify their energy economies and reduce their oil imports through petroleum imports, and other things, so that together we do not increase that percentage on the Persian Gulf significantly.

That is what I meant by "we are all in this together." Likewise, they should pursue their nuclear programs as well and build stocks.

The CHAIRMAN. Would the Senator yield for just one point?

Senator FORD. I'd yield for anything to the chairman.

The CHAIRMAN. A point that I think needs to be made, and you touched on it, Mr. Secretary, as you were testifying, is that we cannot look just at oil and gas production or consumption in a vacuum. There are other energy sources.

Senator FORD. Yes; and I will get to that.

The CHAIRMAN. And conservation plays a role in the total mix as well.

But, in spite of all of those changes, we are consuming more total energy in this country today than we were in 1974.

I was just looking at a table. We went up from 72 million quads to over 73 million quads of energy over that period of time.

Mr. MARTIN. That's not much of an increase, though.

The CHAIRMAN. It is not much of an increase, but it is an increase. There is a kind of innate idea in this country that indeed, because of the downturn in the economy, because of increased conservation and all the rest of these things, that there has been a downturn in energy consumption. But the truth is there has been a rise in energy consumption over the last decade.

Excuse me for interrupting, Senator.

Senator **Ford**. It's beautiful, Mr. Chairman. You and I think alike on this one.

Mr. Secretary, you said a few moments ago that they would jerk the chain on our public. Who are "they" who would jerk the chain on us?

Did I understand you right?

Mr. **Martin**. I would say the same folks who tripled the price in 5 months in 1979—the OPEC countries.

Senator **Ford**. All right.

So, what you are saying to us, then, is that the OPEC countries are controlling us, aren't you, because whatever they get for their price of oil, that is what our price level is? We are being set up to be cut off at the knees again, as I see it.

Mr. **Martin**. I think that the level, their share of the world oil market in the late 1970's, when they could do that, was around 65 percent to 70 percent. Right now, they are down to 35 percent and 40 percent. That is a big difference.

But if we do continue our imports and others do and we rely on that particular set of producers for 70 percent again, yes; I think that puts them in the same position they were in the 1970's.

Senator **Ford**. So you say they are getting ready to jerk our chain and I say they are getting ready to cut us off at the knees.

You know, when they embargo, there is going to be suffering around here. They do more damage to us than anything I can think of based on national defense—we're talking about how part of energy supplies are in the defense field, too. We are not talking about just somebody driving an automobile or not.

Dad always taught me to buy low and sell high. It seems that the administration wants to buy high and quit buying when the price is low, as it relates to the strategic petroleum reserve.

You don't want to buy anything. You never wanted to buy anything. You have been forced to do that. You had a hard time keeping up with the fill rate on a daily basis, and now you are saying you would be willing to buy 35,000 barrels per day.

Is that what I understood you to say?

Mr. **Martin**. That's correct.

Senator **Ford**. Or that you could go that high if you were forced to?

Mr. **Martin**. Senator, I think we have had a change in our position. As the chairman noted earlier, before we were asking for a moratorium at 500 million barrels. That was up from 100 million barrels a few years ago. We felt in the earlier market conditions of January and so forth that that was an appropriate thing to do, given budget constraints.

The President has now, however, in light of present market constraints said we should continue to fill and reaffirmed the goal of 750 million barrels.

Senator **Ford**. Well, at 35,000 barrels per day, it will only take you 20 years to fill it—you know, 250 million barrels, 35,000 a day, that's 20 years. That's lipservice, or something less than lipservice, as I see it.

Your testimony, as I perused it, made some pretty dire predictions about declining domestic oil production and increasing import dependence.

It's not hard to figure out. What do you want to do about it, though, in case they embargo?

What do we do other than the strategic petroleum reserve?

How long would it take us to get back into exploration drilling? How long would it take us to get the oil field equipment off that fellow's farm out there in Oklahoma, that we see a lot of? They're buying it a nickel on a hundred and slicing up some of it and putting it in scrap.

You know, maybe there are a lot of rigs that are stacked, but I'm sure he's going to make a killing one of these days. If he just lives long enough, he's going to be the richest son of a buck in the world. You can just bet on that.

Mr. MARTIN. Well, it is going to take years to reconstruct the service industry. We know that rig count is down below 700 now.

Again, if you talk to the bankers in New York about the state of the industry, they say "when the prices rise again" the service industry will respond like they did in 1979. "When the prices rise."

Senator FORD. How long did it take them to respond in 1973? You know, both of them happened in that decade.

Mr. MARTIN. I think the point I want to make, Senator, is the market in this case, if the price doubles or triples again, the service industry is going to respond.

Senator FORD. Who is going to control the price, whether it doubles or triples?

Mr. MARTIN. I would say that is dependent on the share the traditional OPEC cartel has.

Senator FORD. So we have no control over our energy destiny?

Mr. MARTIN. At the moment we have done, I think, significantly well over the last 10 years, and we have reduced the share of OPEC to a very low percentage compared to historical averages.

Senator FORD. There is a lack of economic vitality in this country, and when industry is at less than 70 percent of production, they are not using energy. You have done a pretty good job of seeing that industry is cold instead of warm.

Is not a 30-percent reduction of capacity in our industrial complex part of the reduction of the use of energy?

Mr. MARTIN. I don't understand your question, Senator.

Senator FORD. Well, if you have a factory that can produce at 100 percent and it is only producing at 70 percent, it needs 30 percent less energy, doesn't it?

Mr. MARTIN. Well, that's correct, the way you have stated it.

Senator FORD. Well, if our production capacity is down to 70 percent, we are using 30 percent less energy, are we not?

Mr. MARTIN. Are you talking about the production capacity of industry as a whole, or the oil industry?

Senator FORD. Industry as a whole.

Who in the world uses oil and natural gas if industry doesn't use it?

Mr. MARTIN. A lot of people benefit from lower oil prices, precisely.

Senator FORD. Absolutely.

But if they are not working, they don't care if it is zero because they can't buy it.

This is part of the surplus that we have today. I think that is significant.

You can begin to look at the pattern and begin to put the quilt pieces together, and you will get something a whole lot different. We are talking about the oil industry. We are dependent, whether we roll or are on wheels. Defense needs the petroleum. The industry needs petroleum.

What if we get an embargo today? How long will it take us to use up our strategic petroleum reserve? And you say it takes years to get us back into exploration, it takes years to get the rigs back into service.

Mr. MARTIN. But we would not have an embargo today because no one has a dominant share of the market?

Senator FORD. Oh, my friend, really.

Mr. MARTIN. Who would embargo us?

Senator FORD. OPEC is setting us up to embargo.

You may shake your head, but it is coming.

Mr. MARTIN. Oh, OK, in the future. But you said today if someone would embargo us. I do not see that happening to us today.

Senator FORD. What if we get 40 percent of our imports cut today? What would you do?

What is the program that you have that would help this country?

How would we divide it up?

What would happen if we lost the 40 percent today?

Mr. MARTIN. Well, I'd like to know how you would lose the 40 percent.

Senator FORD. What if they shut off 40 percent of imports coming into this country?

Mr. MARTIN. Who would shut it off today?

Senator FORD. If that is closed off today, what we are going to do?

Mr. MARTIN. Who would shut it off?

Senator FORD. Who in the hell is selling to us?

Mr. MARTIN. OK; let's look at who is producing the oil today.

You have OPEC at 17 million barrels a day. You have non-OPEC, with Mexico, Canada, Egypt, and so forth, at 12 million, Western Europe at 4 million, and us at 9 million.

I do not think anybody has that great a share of the market that they could embargo us at this point in time for political or whatever reason.

I think that the situation we have talked about in the 1990's, where imports creep up, there, yes. But I don't see anybody embargoing us.

Senator FORD. Not even in the 1990's?

Mr. MARTIN. OK; that's a different question.

Senator FORD. No, it is not. It is not.

Today we would have a hard time. But Mexico probably would pay off her debt if we had an embargo today because their oil would go sky high. That may not be all bad.

We would not have to restructure their loans again.

Mr. MARTIN. If your specific question is the embargo, I agree wholeheartedly that one of the best things we can do is build up our stocks and work closely with our allies.

As you know, we do have an agreement out of 1973 in the International Energy Program, in which there is a sharing scheme, that would share oil in the event any country is embargoed with the other IEA countries.

But I think that is less a positive deterrence than stocks. I really think we come back to stocks.

People will not embargo if it is an integrated oil market. We will just get our oil from somewhere else.

It is very, very hard to say, you know, you are not going to get the oil because of the integrated nature of the market and the fungibility.

Now, they can say you are not going to go and get it and cut it back and, therefore, induce a price rise for everybody. That I think is probably more of a concern—the price rise that might be induced by a situation or a disruption or a politically motivated event, as opposed to an actual supply disruption.

You know, we saw in 1979, when the Iranian revolution began, that we had plenty of oil. But that oil began moving to Rotterdam and the Orient when the prices went up in those countries who were more dependent on the Middle East.

So we, in turn, paid the price, too.

Senator **Ford**. Let me ask you what you are doing to encourage the use of domestic resources?

Mr. **Martin**. I think we have a number of items on the table which we would like to act on, including natural gas, including repeal of windfall profit tax, including support of retention of the tax benefits for the oil and gas industry, which we estimate will keep about 700,000 barrels in this country.

Also, we are building the SPR.

I am not saying that we have not exhausted the list of things that we have on here, but we have a lot of things that have not even been acted on yet that we think would help.

Senator **Ford**. Do you want to eliminate the oil and gas industry's depletion allowance and the special tax breaks in the tax reform bill?

Mr. **Martin**. No, we are for those.

Senator **Ford**. What?

Mr. **Martin**. We are very strongly supportive, Senator. Recently, John Poindexter, National Security Adviser, wrote a very strong letter about this. I commend it to you to read.

Senator **Ford**. OK.

The President would not veto a tax reform bill that lets a little credit in for the oil industry, would he?

Mr. **Martin**. I cannot say what the President would veto or not.

Senator **Ford**. Well, what is your impression?

Mr. **Martin**. We are supportive of the Senate's original tax reform measures, which were adopted by the conferees, which dealt with intangible drilling costs and retention of the depletion allowance.

Senator **Ford**. What about the coal industry—c-o-a-l? You didn't think I would ever get around to that, did you?

Mr. **Martin**. No; I was sure you would, Senator. [General laughter.]

I made a point earlier today to the chairman that often we talk too much about the oil problem as a domestic problem. It is really an energy problem and it's an international problem. That is where I would put in coal.

I think coal is one of the finest resources we have, not only for use here, but for export. By exporting, we create jobs, we diversify other countries' energy resources, and we reduce the trade imbalance.

We are very strongly in favor of the coal industry.

I believe the coal industry retained the depletion allowance as well in the tax reform measure, or at least part of it.

Senator **Ford**. We had to fight to keep off a tax on unmined minerals.

My State just lost a large coal contract in Florida because of imported coal. That is part of the domestic problem that we have.

Mr. **Martin**. Is that the Colombian coal?

Senator **Ford**. Colombian coal, yes, yes.

I think about $850 million in grants, low interest loans, and so forth, to build a mine and to build a railroad and a deep port were involved.

Mr. **Martin**. Is this the Exim loan?

Senator **Ford**. It has Exxon in it, too. There is 27 years to the contract, and only about a year and a half of it has run.

The coal operators and coal miners in southeastern Kentucky lost that bid because we had set them up.

My soybean farmers in western Kentucky are in trouble because we let Argentina have $400 million to teach them how to grow soybeans.

All these things, you talk about us and them, and it is more "them" than it is "us." We keep going through all of this, and yet, we expect our coal operators and our coal miners to make the money to pay the taxes to keep the mare going. And we have a hard time doing it.

For example, you call for a repeal of the Fuel Use Act. I want to keep coal capable in the law. And you want to put that out. But yet, you say what a great thing coal is.

What if we have another problem and we run low on oil or natural gas or the price gets beyond where you can help the public at large or make them better off? So you keep their prices down. Utilities are not coal capable, and oil and natural gas go out the top of the monitor, again, and then we are right back doing opposite what you said we ought to be doing.

So then you want to eliminate coal capable.

My friend, you might as well bring your bedroll and lunch and whatever you drink because if you are going to try to get rid of the Fuel Use Act, Ford is going to sit on the Senate floor.

It is going to be a long time because coal capable has to stay there. It is one of those things I believe in.

This administration has ruined the synthetic fuels operation. We had something going. If you begin to look at everything that has been happening in the last 6 years, this administration has done nothing to support energy except to get on the free market roll, with no market, just let her go.

There has to be a point, as the chairman said a while ago, where we have to give some leadership. The international market is regulating what we do here, and we cannot allow that to happen.

So, we are not doing anything to insure fuel availability to utilities, not a thing, by eliminating the Fuel Use Act.

You are not doing anything. If you have the decisions on the basis of fuel availability and economics, does not that mean that new power plants ought to be capable of burning coal?

Mr. MARTIN. [Nods affirmatively.]

Senator FORD. You are shaking your head. That's yes, and that's fine.

You know, you have been shaking your head all morning and I am glad to see you do that.

Mr. MARTIN. Let me say a couple of things on coal.

One is this. You referred to the Colombia coal project, the Exim support for that.

We had a very interesting hearing with Senator Warner a few weeks ago to look at how we can be more aggressive on coal exports for this country.

One of the things we pointed out was that there are many countries which restrict imports of coal. The Germans and the Brits are the most notable examples.

Senator FORD. They practice self-interest. We practice free trade.

Mr. MARTIN. Our coal could compete very, very favorably in those markets, as they have high cost suppliers.

If we began to erect some sort of barriers to keep coal imports out, I am afraid that that would only induce others to be more restrictive on their imports of our coal.

I am clearly very supportive of coal exports and I would be glad to give you my testimony on this in more detail.

The second thing is that coal is really dependent on electricity demand. That is the really big question.

Last year, this committee had hearings on when the lights go out, I believe. Because of that hearing, we have upgraded our work on electricity demand.

Right now, we don't know if we have a 100-gigawatt need in the 1990's or 300 gigawatts. It is a big, big range.

Clearly, coal can play a terribly important role in that.

We face restraints in utilities and some problems of rewards and risks in utility industries at this point in time. We favor getting into the thick of that issue and trying to work that out, so that the coal markets can expand in that way as well.

Senator FORD. Then why would the administration be against keeping the coal capable portion for new powerplants?

Mr. MARTIN. I think the focus on that repeal is on getting rid of past constraints.

I have some sympathy that when these reserves are ultimately exhausted we, and everybody else, will be going back to coal again. The problem is when oil and gas are available, people do not look at coal. When they are not available, they jump on the coal bandwagon.

I hear what you are saying: that if we do not pay some attention to that now, there will not be any coal bandwagon in the 1990's when we need it.

Senator FORD. It's just the same with everything that happens here. Synthetic fuel, maybe that would have been costly, but we should, in my opinion, take the chance that we might build some white elephants. I mean by that to at least try something so that you can find something that works. The demonstration plant at the Shawnee generating facilities will be retrofitted for a combustion operation.

There are all of these things that we ought to be trying.

Most of the money has been squeezed out of State government and out of the ratepayers to build things like that.

We fought like the devil to get $30 million to go into that kind of research. Then we saw the synthetic fuels operation go down the drain, and that hurt.

Now we get into clean coal technologies, and we say that we are going so slowly that it probably will be obsolete, and new acid rain legislation will be in place and clean coal technologies will not be helpful.

You know, all these things are laying out there, but no one really wants to grab a hold of them. And the money is available, so why don't you accelerate it?

It just seems to me that we are not preparing our own resources, we are not protecting our own oil, we are not protecting our own natural gas, we are not protecting our own coal reserves, or to have the domestic resource to do something with.

We have to help all three of them. There is no reason to sit back and let things go down the drain.

I am going to quit, Mr. Chairman.

It just infuriates me, I guess, because I see the problem coming. We preached it back in the 1970's, and it came.

We cannot guarantee there will not be another uprising over there in the Persian Gulf. I flew over it. I have been there. I understand it.

I would hope there would be more consideration, more concern for our domestic problems than it seems like we have external concerns.

I know the world is smaller. But in order to be stronger and safer, we do not have to be dependent and we do not have to keep trying to buy our friends. It's like everybody thinks $100 million went to the Contras in that bill. Why there was $400 million—$300 million to send to the other countries that were opposed to what we are doing, and $100 million to the Contras.

That is far-fetched from what you are talking about, but that is an attitude. We have bought the countries that were opposed to it with $300 million.

We have to stop buying those things and start doing things that are effective here.

We have been cutting our scholarship programs for our young kids who are smart and bright. It is a philosophy where you would rather spend money overseas than you would at home.

Thank you, Mr. Chairman.

If I get any more worked up, I will be preaching past the collection plate here in a minute. [General laughter.]

Senator FORD. I apologize for that. Being a Baptist, everybody wouldn't believe that I am pretty good at understanding the other religions, too.

The CHAIRMAN. Gentlemen, thank you very much for your testimony. We appreciate it.

We do not underrate at all the importance of trying to understand, and toward the development of a policy that does meet the security as well as economic benefits of this country.

Thank you for your testimony.

Now we will turn to our second panel: Hon. James Akins, former Ambassador to Saudi Arabia; Mr. Charlie DiBona, president of the American Petroleum Institute; Mr. Lloyd Unsell, president of the Independent Petroleum Association of America; and Mr. Theodore Eck, chief economist for Amoco Corp.

You gentlemen are not strangers to this committee. You have all been here one or more times in the past. I want to welcome you all back and thank you for your willingness to spend the time and effort necessary to prepare testimony and to come here today.

We will start with Ambassador Akins.

STATEMENT OF HON. JAMES E. AKINS, FORMER AMBASSADOR TO SAUDI ARABIA

Ambassador AKINS. Thank you, Mr. Chairman.

I do not think there is any question that if the price of oil stays low, the world, as a whole, will benefit. The only question is how long can it stay low? If it were 100 years, as some people maintain, or 50 or 25, then there is no question that we would have every moral reason and every practical reason to insure that the prices stay low.

But, when we look at the facts, we see that if the present situation continues, this is not going to be 25 or 100 years that we are going to have to play with. It is going to be 10 years, as the administration spokesman said, or 6 years, as Yamani has said, or even less, as some people say. It depends on where the price goes.

I was quite encouraged by the opening statements of the administration spokesmen. They gave figures that I found quite chilling: 7 to 10 million barrels imported within 10 years; OPEC having resumed its dominant position within 10 years, or perhaps even less. And one would conclude from this statement that they would present a program for protecting the Nation because these figures are hair-raising.

And yet, all we hear is increased storage, which, as you know, I am strongly in favor of, and then the market, and the market is going to determine the price, and we rely on the market and we must not have any conversation with OPEC or any of the oil exporters; it's going to be the market that is going to set the price.

Vice President Bush a few months ago made a very interesting statement just before his trip to Saudi Arabia. He said that we have to do something to prevent or to stop the free fall of oil prices. He was immediately disciplined.

He ate crow, as usual, and then he went off to Saudi Arabia.

The Saudis were somewhat bemused by the Vice President's visit because they assumed that his original statement was what he really felt, that this would create a catastrophe for the United States and for its allies. They assumed that for political reasons he made the public retraction. But when he got there, all he talked about was the market: the market must set the oil price.

I talked with a very prominent Saudi afterward and he said, "Do you understand what would happen if there were a free market in oil? '

I said that well, I thought so. He said, "Where do you think the price of oil would go?"

I said, "Well, to about four dollars."

He said, "That's right. That's the figure we're using."

He said that if we produce to capacity, we and our allies in the Persian Gulf area can produce almost 20 million barrels a day of oil, which is in excess of OPEC's total production today. This backs out the North Sea totally, it backs out a good deal of American production.

He said, "What would happen to American industry after 2 years of $4 oil?"

I said, "Well, I think it would be in pretty bad shape."

He said that it would be ruined.

He said that what we can't understand is how you can talk about this sort of thing. "We assumed that you would take measures to protect yourselves. It never occurred to us that you would allow this to happen."

He said, "You talked at one time about an import fee but you are not talking about that any more. Your President said he will never consider an import fee."

This is not really what I am going to talk about today. Other people will talk about the same subject. But I thought I had to mention these things because national security is certainly at stake.

You can argue, as I said before, that the world, as a whole, will benefit from a low oil price. Some banks will go under, some countries will have revolutions, the American industry will certainly be badly hurt, but the Nation as a whole and the world as a whole will be helped by these low oil prices.

Our concern, of course, is what happens when we get into balance.

When you talk about balance of supply and demand, we are in an extremely vulnerable position. We have to have a very, very large surplus of supply, and we do not have that today. It is grossly exaggerated in some of the statements made by people who are commenting on the oil industry.

It is not 10 or 15 million barrels a day of surplus capacity; it is considerably less, and it is going to be declining as the years go by.

If Yamani is correct, in 1992, we will have balance. What does that mean?

This means that any minor disruption of supply will cause a supply shortage, a new panic, and a skyrocketing of oil prices.

One must recall that the shortage of oil in 1973 and 1974 was 3 percent of demand. In 1979 or 1980, there was not any shortage. That was another problem. We created the shortage ourselves to a certain extent by building up our stocks at that time. You should not build up stocks when prices are high. You should build them up when they are low.

But you cannot argue, no matter what you say, about who is hurt and who is benefited by high or low oil prices. You cannot maintain that the people who export oil are helped by low oil prices.

Everybody who exports oil, inside OPEC and outside OPEC, is hurt by the low oil prices. And nobody, no ruler in any government is going to take a decision on the basis of what is good for the world.

Even we don't do that, Senator Ford. We generally take actions on the basis of what is good for us. Whether we do or not in this case is irrelevant.

What the oil exporters do is going to be determinative of the oil prices in the future, and they are badly hurt by the oil prices. I do not only mean OPEC. I mean every other country outside of OPEC.

I was somewhat appalled by the statement made here that the countries outside of OPEC are not cooperating with OPEC. They are. The only country that is not is the United Kingdom. Every other country is cooperating with OPEC, and they will continue to do so in the future for exactly the same reasons: they are being hurt by these low oil prices.

The question that we have to face is are they able to do anything.

There were also frequent statements made about OPEC gauging us in the past and about OPEC's failure subsequently. These statements I think misunderstand the nature of OPEC and what happened when the prices increased in 1973 and 1979. The market, basically, raised the price and then OPEC tried to ratify the prices, with some success.

They have had a failure in the last few years in trying to limit production and maintain the prices. But Yamani did not talk to us about limiting, about a dialog on prices, when the price was $38, as the State Department representative said. It was $28, and $28 in current dollars, and, therefore, a declining price in oil.

I describe in my testimony the Yamani plan. I still think it is a good plan. I won't go into that now.

But what we are talking about is does OPEC have a chance of working out a new arrangement on supply, which will result in a rise in price?

The consensus in this country, as you know, is no chance whatsoever. This is the view of the administration. It's the view of most people around the world. You read it daily in the Wall Street Journal, and in the Economist in London, and in the London Financial Times, and so on.

The syllogism is that OPEC is a cartel; cartels cannot last; therefore, OPEC cannot last.

Another one that is used quite frequently is this: all OPEC countries, all oil exporting countries need money—this is quite true. Ergo, they will increase their production, thereby decreasing the price of oil and decreasing their income.

We make this calculation and we assume, quite miraculously, that nobody in OPEC or outside of OPEC who exports oil could make the same calculation.

I can guarantee you that they do.

Saudi Arabia is now increasing and has more than doubled its exports of oil, and its income is considerably less than it was there. The statement made earlier by the administration spokesman that Saudi Arabia wanted a higher proportion of the market is only partially true. Proportion of the market is not important, or is important, but what is vital is income. If their income is less, by doubling their production they have not gained very much. In fact, they have lost, as has everybody else.

I have just been to Africa and have talked with a number of the African leaders, including the Nigerians and the Gabonay. They are absolutely determined that if there is an agreement in OPEC, they are going to stick with it.

The Nigerians said, "We will stick with our quota in OPEC if the price goes to $5 or if it goes to $35." They are quite determined that this agreement is going to last.

The agreement that they have—no, let me go back a little bit.

About 6 months ago, they made some proposals to OPEC and to the non-OPEC exporters, that OPEC would cut its production by 20 percent and the non-OPEC exporters would cut their exports by 20 percent. This would have created a shortage in the world of about 8 percent of demand.

This is something we have never seen before and the price would have gone back to $28 immediately.

For a variety of reasons, the Saudis thought that that should not be done so quickly, and so they came up with half of that. This is the agreement that they reached last month: that OPEC production would be cut by 10 percent, that non-OPEC exporters would cut their exports by 10 percent. They all agreed. I really wonder what the sources of intelligence are in the State Department if they say that these are symbolic or meaningless cuts.

Ten percent is not a meaningless cut. And they have all agreed to that--China, Russia, Norway, Egypt, Oman, all of them—all except the United Kingdom.

My position is that the United Kingdom is not terribly important. You can have an agreement on production that excludes the United Kingdom and it will still be quite valid.

If you recall, we did have a free market in this country once, and the price of oil went to 10 cents a barrel, or $4, which is roughly equivalent, I suppose, to 10 cents of those dollars in 1930.

But then we restrained production and the price went back to $1 very smartly. But one State, California, never participated in the cuts in production, and the agreement on petroleum rationing gave us a stable market in oil for 40 years.

It was a period of great prosperity for the United States and for the world.

The question I go back to again is can OPEC do this? I think they can because they have no choice.

Let's take some of the countries outside of OPEC. Take Egypt. It has lost 70 percent of its income from oil. It has lost 50 percent of its emigrant remittances, largely because of the slowdown in the Persian Gulf area. It lost over half of its revenues from tourism.

Egypt is in a catastrophic position. Egypt must have a higher price for oil.

I was in Indonesia a year ago. The Minister of Finance told me that if the price of oil dropped to $25 a barrel, they would have serious problems; at $20 a barrel, they would not be able to pay current expenses.

The price was well below $20 a barrel.

But what I say about these two countries applies to just about every other oil exporter, excepting the industrialized countries of the Soviet Union and Norway, who are not in the same position.

They do understand what has to be done. They do have the model set by the United States, the model of production in the United States. They have studied this extremely carefully, and I have no doubt that they are going to work out an agreement.

The question then is when.

There is going to be an OPEC meeting on October 6. I think there is an extremely good chance that they will work out an agreement and a chance better than 50 percent that it will last.

Now, 50 percent is not good enough.

I have three rules or three laws of the Middle East. The third law is that in any conflict, irrational conflict between a pessimistic and an optimistic prognostication or interpretation, the pessimistic is always right. I fear that in this case, there is a chance that the agreement will not last and the prices will go back down again.

Why is this bad?

It would be the worst possible development, as far as we are concerned. If there is an agreement and the prices go back up again, then there is cheating in OPEC and the prices go back down again. Yamani, by the way, fears that this is what is going to happen. This is the basis of his talk at Harvard.

He thinks, however, that after the second oil collapse, next year, 1987 or so, there will be a real OPEC agreement. The prices then will go back up again and then we will have a period of stability lasting for about 10 years or so, for as long as we need it.

This would be bad for us because the American industry would be destroyed. The banking industry would have its confidence completely destroyed. You would not be able to get anybody to think that the second OPEC agreement would last any more than the first OPEC agreement, and this is why I would very, very strongly urge actions be taken in the United States right now to protect the American industry.

Sure, it is stocks. But, as Senator Ford said, what is going to happen when the stocks are exhausted? I am not talking about an embargo, particularly, but I am talking about a disruption. If we get to a position where supply and demand are in balance, if there is any disruption any place in the world, what then happens to prices? Prices will go to $50 a barrel or higher.

That is one thing we have to do.

I think we also have to have a high gasoline tax. As you know, I have talked about that for the last 15 years.

I still think it is a good idea and I still think it is essential for the country.

Then we come to the oil import fee. I have said about the oil import fee that we have to paraphrase Churchill: It is the worst possible solution, except for all of the other solutions.

What are we going to do? The industry has to be protected, particularly if we go through a period of violent disruptions right now, for the next year and a half. If we could guarantee that the domestic price of oil is $25 a barrel—and I know that is a heretical figure—if it is $25 a barrel, I do not think it will cost the Government very much in the long run because I think the price of oil is going to $25 a barrel by the end of next year. But it would preserve the American industry, and this is something that is of extraordinary importance to the Nation.

Forget about taxes. Let's talk about the Nation as a whole. This is one thing that I find so appalling about the administration's remarks which we have just heard. The figures are 7 to 10 million barrels a day in imports, most coming from the Persian Gulf. But he didn't say anything about prices. Well, he did say at the end that the prices will go higher. He said they will gouge us. They will go up automatically if supply and demand comes back into balance.

Then we come up with no program except the market.

Thank you.

[The prepared statement of Ambassador Akins follows:]

OPEC'S FUTURE, THE CURRENT OIL CRISIS AND THE NEXT ONES

United States Senate
Committee on Energy and Natural Resources
September 18, 1986

James E. Akins
Ambassador of the United States of America, ret.

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Introduction: 1945-1972

The countries currently comprising the Organization of Petroleum Exporting Countries (OPEC) look at the years from 1945 to 1972 as a period of particularly exploitative colonial domination. The international oil companies set the price for crude oil; they determined how much should be paid to the countries from which the oil was taken; they decided how much was to be extracted and they made enormous profits for themselves and for their governments. The late Shah of Iran subjected most visitors to a standard lecture on the "OPEC barrel" in which he demonstrated that oil companies, through profits, and consuming governments, through taxes, took far more from the sale of each barrel of oil than did the exporting countries in taxes and royalties.

The recovery of Europe and Japan after the Second World War is often attributed to American economic assistance. It could just as easily be ascribed to the stimulus given by extremely low energy prices. As oil is not a renewable resource, it is not illogical for OPEC to consider low oil prices to have been the equivalent of a massive transfer of wealth from the underdeveloped world to the industrialized world.

Mideast War of 1973: The First Oil Shock

Oil prices rose in 1973 and 1974, not through conscious acts of OPEC but because the United States came massively to Israel's assistance with both military equipment and financial aid during the Middle East War of October 1973. This inevitably provoked an Arab oil embargo which caused some shortages in the world - about 3 percent of total demand. Consumers in panic bid up the price of the available oil. By the time the embargo had ended, the price of oil had quadrupled, rising from around $3/barrel to $12/barrel. Although this certainly was a shock to the world economy, consumers adjusted quickly and by 1978 the rate of growth in consumption of energy and even of oil was almost as high as it was in 1972. OPEC considered this as proof that oil had been severely underpriced.

Iranian Revolution: The Second Oil Shock

With the Iranian Revolution of 1978-79 and the subsequent Iraq-Iran War of September 1980, oil prices trebled again. Spot prices exceeded $40/barrel and the official OPEC price was raised to $34/barrel. This was unquestionably a much greater burden to the world economy than had been the price increase of 1973-74. It was not only too rapid but it went too far - at least for the time - and it caused economic hardship in most consuming areas, particularly in the less developed countries (LDC's). Consumers adjusted this time by looking for new sources of oil outside of OPEC, by shifting to other fuels, and by instituting wide-reaching and still continuing conservation measures.

It was not obvious to all observers that this would be the outcome. There was no immediate effect in 1980 on consumption which, in the short-run, is remarkably price inelastic. Oil economists and oil company executives predicted oil prices would reach $100/barrel and all oil exporters, both in and out of OPEC, were anxious to believe them. The exporting countries adjusted quickly to a much higher standard of living; they raised their economic goals to levels that would have been unimaginable ten years earlier. Euphoria was almost universal in countries which had their own energy resources. Their expectations were disappointed.

The Collapse of Oil Prices - 1986: The Third Oil Shock

The current oil crisis is a crisis only for the exporting countries. There are only a few of them: the 13 OPEC countries (all of which must be considered underdeveloped) and 7 LDC's among the major non-OPEC exporters (Mexico, China, Egypt, Oman, Brunei, Malaysia, and Angola). Three other oil exporters (the United Kingdom, Norway, and the Soviet Union) are also hurt by the decline in oil income but their economies are not overwhelmingly dependent on oil exports. (Other oil exporters have also been hurt; e.g., Bahrain, Syria, Tunisia, but their exports are too small to influence the market.) A degree of Schadenfreude in the rest of the world is inevitable. Consumers paid with difficulty the increased oil prices in the 1970's and they were angered by the waste and corruption in many of the oil exporting countries. Now, "the Arabs" - and OPEC is almost universally seen as an exclusively Arab organization - are getting their just deserts. The economy of the rest of the world is stimulated by the low oil prices, which at the time of this writing are no higher in constant dollars than they were in 1973 just before the Mideast War. The overwhelming benefit of the collapse in oil prices goes to the industrialized world simply because it consumes the great bulk of world oil. But even the LDC's, and particularly some of the larger newly industrialized countries (Taiwan, Korea, India, Pakistan, Brazil) also are major beneficiaries. Some banks, some oil companies, some oil service companies in the developed world will be hurt - even ruined - but it is incontestible that the world as a whole is helped by lower oil prices and will continue to be so for as long as prices stay low.

The world seems to have suspended rational thought on the subject, to have delivered itself to unrestrained joy. Professors at prestigeous universities tell us that there can be no shortage in the foreseeable future. A head of a major brokerage firm in New York in February predicted $4 oil by August 1986 and with it a major world economic boom. These assumptions are dangerous as they are based on wishes, not on facts.

Long-Term Consequences of $10-15 Oil

Let us assume that the price remains low - $10-15/barrel. Let us also, for the moment, ignore the problems faced by exporting countries and concentrate instead on the undeniable benefits it would bring to consumers. The crucial question is: How long could these benefits be enjoyed? If it were for 100 or even 50 or even 25 years, the nations of the world would have every political, economic and moral reason to insist on maintenance of the lower oil price. They would also have a good chance of achieving their goal as the assumption can be valid only if there are huge unexploited oil reserves. Unfortunately, facts lead to a different conclusion. Oil reserves are quite well defined. There are few prospects of finding substantial new oilfields. $10-15 oil would end the search for new oil and for new energy sources; conservation measures would make no economic sense; consumption of oil would rise; and the world would quickly return to dependence on OPEC - as in 1973 but with a significant difference. This time it would not take a major Middle East upheaval to curtail oil supplies; supply would be largely concentrated in the Persian Gulf and it would be in precarious balance with demand. Any minor political disruption could then create a real shortage.

There is no reason to assume - as many in the world do - that every country in OPEC will raise its production as soon as possible to its ultimate physical capacity. Even those countries with the largest oil reserves have stated unequivocally that they intend to place limits on their production. They have no interest in exhausting their only resource at low prices.

In 1970, a major oil company in its ten-year projection of energy supply and demand concluded that by 1980, 80 mb/d of oil would be consumed in the non-Communist world, of which 26 mb/d would come from Saudi Arabia. This rate of production would exhaust the Saudi proven reserves in 17 years. The Saudis had not been consulted; there was no reason to believe that they would ever have considered such a high level of production. They would certainly not do so today. If the Saudis were to keep production at no more than 5-6 mb/d as they have indicated, and other countries in the Persian Gulf also conserve their resources, the world could face a supply shortage within five years and possibly less. Not only would the search for new oil have stopped, but existing high cost oil in the North Sea, North America and elsewhere would have been shut in - some lost permanently. Declining production in other areas - including much of OPEC - would not be replaced. With reduced supplies combined with increased consumption, the world would quickly face a real physical shortage of oil and prices would skyrocket. $50 oil is not an unreasonable assumption. There is not a single technical authority in the industry or any government I know who disagrees significantly with this assessment. The optimistic scenario of unrestrained oil production at low prices sufficient to cover all consumer needs for the indefinite future is beloved of politicians in the U.S. and other consuming nations. It is supported by academicians and economists who have scant knowledge of geology and less of international politics.

Consequences of Low Priced Oil on Exporting Countries

Were the price to stay at $10-15/barrel for as long as two years, there would be significant economic hardship in every oil exporting country, excepting Saudi Arabia and its allies in the Gulf Cooperation Council (GCC). Venezuela has very large currency reserves but they would be exhausted after two years of $15 oil. We could expect political upheavals in many of these countries. It can be argued that as the wealth is new (the countries fifteen years ago had very little income), a change would not be hard to adjust to. This is not convincing. The middle and the lower classes have had greatly increased standards of living; military officers in all countries are enjoying new equipment and a new status which they will not relinquish easily. Shaikhs and Emirs in the Middle East like to extol the simple life of their childhood and frequently threaten to close down the oilfields and return to their tents if humiliations from the west do not end. This is hard to imagine. It would be impossible for any country to turn back smoothly to the simple life of 1970. Once governments and their populations adjust to higher standards of living, a set-back is far more unsettling than had there been no increase to begin with.

Mexico's problems have been well publicized and any "solution" that is workable will be an overt or a disguised abrogation of the Mexican debt. There is no propensity in Mexico (or elsewhere in Latin America) to allow the foreign banks, which enjoyed the atmosphere of free-wheeling corruption of the previous Mexican administration, to be paid fully for loans which should never have been made. To do so would require the Mexican citizenry, and particularly the lower class, to be subjected to a program of extreme austerity. The choice of the Mexican people and government will be simple: the banks will have to assume a major portion of the burden themselves. Of course, a rise in oil income could transform Mexican thinking.

Egypt is also facing extraordinary problems. It has lost almost 70 percent of its income from oil because of the declining oil price and a decline in production. Remittances of Egyptian workers abroad this year will be half of those of 1985. There has been an equally severe decline in receipts from tourism, springing largely from Americans' fear of terrorism and their reluctance to travel abroad, particularly to the Middle East. The economic problems which beset Sadat, and were at least partially responsible for his assassination, will become worse under Mubarak in the absence of massive economic assistance from Europe, America or the Arab world - none of which seems probable. Egypt could be given breathing time if the oil price rose again.

A few years ago when Indonesia tried to raise the price of kerosene and diesel fuel, it faced the most serious internal strife since the crushing of the Communist movement 20 years ago. The current loss of income - should oil price stay at $10-15 - will cause economic difficulties of a far greater magnitude. It would be foolish to say these will easily be absorbed by the people or the government.

There is no question that all oil exporters, in and out of OPEC, will survive as nations. It is much more questionable whether all governments would survive. Without getting too specific, I would expect at least a third of the oil exporting *governments* would face upheavals or even revolutions within two years of very low oil prices. And all would have gone through a severe economic crisis. We can be sure that the leaders of these governments will take actions to protect themselves.

While one can argue convincingly that the world as a whole would benefit from low oil prices, one *cannot* argue that the major oil exporting countries of the world would also benefit. What may be good and healthy for oil-importers - United States, Japan, Brazil and India - would be disaster for all the major oil-exporting countries. My thesis is that *these exporting countries will not make their decisions on the basis of what is good for the world as a whole in the short run or the long run - no country ever does this. They will do what is necessary to advance their own interests. And the immediate need for income will be more important than prospective sales a decade hence.* They will create a new oil scene which will be very different from that imagined by the *Wall Street Journal* and by Ronald Reagan.

Reason for Price Collapse

Few in OPEC believe that the collapse of oil prices is the result of "economic forces". No oil exporter today - even while admitting past excesses and mistakes in managing income - believes that abstract justice has been served by cutting oil prices by two-thirds. Only Saudi Arabia has concluded that it is a result of OPEC's imprudence in ratifying higher prices temporarily dictated by market forces in 1973-74 and 1979-80. And almost all, including many in Saudi Arabia, look at the present low oil price as a reprise of the situation before 1973 when the LDC's were giving economic assistance, in the form of low oil prices, to the industrialized world.

In 1981 when it became obvious that the Iraq-Iran War would not spread and there would be no further disruptions of oil supplies, the "shortage" suddenly ended. Of course, there was no real shortage to begin with. Buyers of world oil simply panicked at the time of the Iranian Revolution and bought more oil than they should have; they added to their storage and created an artificial shortage. Prices inevitably increased. Because of the high oil prices, expensive - and effective - conservation measures were taken and world consumption of energy dropped. Other forms of energy became more attractive and consumers switched away from oil. The search for new sources of oil accelerated and was successful, displacing OPEC oil. In 1981 with all storage full, a newly relaxed body of consumers started the long stock draw-down. Finally more OPEC oil was offered to the market than could be absorbed and the price decline began. It went from $34 to $28/barrel, a price which was maintained for several years only because Saudi Arabia continued to take cuts in its own production. The Saudi production decreased from almost 10 mb/d to only 2.5 mb/d. OPEC which had produced 56 percent of world oil in 1973 saw its share shrink to 30 percent in 1985.

Saudi Arabia, reacting to this economic setback, ultimately took action which resulted directly in the current oil crisis. In early 1984 the Saudis warned OPEC and other oil exporters that they were determined to protect their share of the market by whatever means necessary. Ahmad Zaki Yamani, the Saudi Oil Minister, at various OPEC meetings said there must be cooperation with the non-OPEC oil exporters and there must be an end to cheating by OPEC members or a price war would be inevitable. All exporters would be hurt, he said, but Saudi Arabia would survive nicely while many of the others would face revolutions. Almost none in or out of OPEC took the Saudi threats seriously.

The Saudis were serious. In mid-1985, they introduced a system of "net-back sales", ultimately tying the price of Saudi crude to that of oil in the British sector of the North Sea. Saudi Arabia would match any decreases in the price of the North Sea oil. The result was as Yamani said it would be: a price war. All oil exporters were shaken; the action was too daring, too innovative, too uncharacteristic of the Saudis. Very little happened immediately; prices firmed in the Fall of 1985 and were briefly above the official OPEC price in January 1986. Then in February, when Winter buying was over, the effect of the surplus Saudi production was felt and prices started their free fall.

Saudi Motives: Destroy World Energy Industry?

Several motives have been attributed to the Saudis. Some think they wanted to bring the price down permanently to $10-15/barrel to destroy the world's high cost oil industry, to stop the development of alternatives and stop the search for oil outside OPEC. Such a price would achieve that goal, but there was no evidence that the Saudis aspired to it. This theory assumes that Saudi Arabia sees itself as a world economic and political power. This is not true. The Saudi indigenous population is not more than 6 million and the Kingdom is hard pressed to maintain regional authority. The Saudis are careful and cautious. They are also realistic enough to realize that they can never reach the status of a world power - even a second-rate power.

Hurt Iran?

Some think that Saudi Arabia's action springs from a desire to deprive Iran of its main source of foreign exchange, thereby bringing about an end to the Iraq-Iran War. This would not be rational; Iraq is hurt at least as much as Iran by the low oil prices. Iran's advantages in the war with Iraq are its very large population and the religious fanaticism of its troops. Neither depends on foreign exchange. Iraq has maintained the balance in the war through its ability to purchase expensive sophisticated military equipment. With lower oil prices it cannot do this; and its main financiers - Kuwait and Saudi Arabia - are less able to transfer funds to Iraq. More important than all this is the certainty that Saudi Arabia cannot afford to take action which would permanently alienate Iran, the largest country in the Gulf. Saudi Arabia must live with Iran long after the war and the oil crisis are over.

Assure Markets in Future?

Another theory is that Saudi Arabia looks to the future: it wants to be able to sell its oil for a long time to come. This makes sense, but it does not require reducing the price to $10-15/barrel. With the cost of production of synthetic liquid hydrocarbons exceeding $40/barrel, the Saudis will be assured of selling their oil if they keep the price significantly below that figure. The official OPEC price of $28/barrel would not seem unreasonable and many in OPEC insist it be restored quickly. In any case, there is no logical reason for Saudi Arabia (or others) to sell below the price at which additional Saudi (or OPEC) oil is displaced by other fuels or at which new conservation measures are taken. While there is some dispute over where this figure lies, it is probably around $24/barrel. It surely need not be as low as $20. It is almost certainly below - for now at least - the #34/barrel which Iran and some other OPEC countries believe should be the restored price. In any case, Saudi support of a price significantly below $24 would assume a total disregard for the needs of other oil exporters for higher income now. Saudi Arabia cannot do this.

U.S. Pressure?

Many in OPEC - even including some in Saudi Arabia itself - believe that the Saudi government was reacting to pressure by the United States: that President Reagan has promised King Fahd support of his throne only if he destroys OPEC. The United States, it is alleged, wants to hurt the Arabs, wants to hurt Iran and, most importantly, wants to deprive the USSR of the foreign exchange it has heretofore gained from the sale of crude oil and gas. This theory has been confirmed in the eyes of OPEC's radicals by President Reagan's repeated assertions that his economic policies have broken OPEC and brought down the price of oil.

While there are many in the United States who are pleased with the collapse in the price of oil both for the direct economic benefits it gives the U.S. economy and the supposed indirect political gains, there is no evidence that the Saudi action was in response to American pressure. Belief in such Saudi action requires an assumption of naivite - even stupidity - on the part of the Saudi Royal Family. The House of Saud is neither naive or stupid; it has an acute sense of its strengths and vulnerabilities; it understands that its survival depends on the support of its people. It knows that if it turns to the U.S. to protect it inside its own borders, it would be weakened not strengthened. The United States did not preserve the House of Pahlavi. The Saudis could never forget the example of imperial Iran. The Saudi net-back system of oil sales, in short, was imposed for the reasons they have given to OPEC and to all others.

Official Saudi Line - True Motive?

The Saudis were unhappy at the decline in their production and consequently their income; they were tired of the non-OPEC exporters getting a "free ride" from OPEC (that is, they produced at capacity and sold just below the OPEC price); they were disturbed at cheating inside OPEC, with members exceeding their production quotas by reducing their prices. Only Saudi Arabia stuck to the official $28 price. This was particularly galling to the Saudis who had warned OPEC in 1979-80 that it must restrain price increases. The price of both OPEC and non-OPEC oil was too high, the Saudis maintained, and would result in effective conservation measures, in the search for and discovery of new sources of oil, and in the switch to coal and other competing energy forms. The Saudis do not hesitate to remind OPEC today that their warnings have been proven valid, and that OPEC must face the consequences of its past imprudence.

The Saudis did not want a price war per se. Nor did they want to break OPEC or bring down the price of oil permanently. They concluded, correctly, that the only way of shocking the countries of OPEC into a solid agreement on production and bringing the non-OPEC exporters into cooperation with OPEC would be to demonstrate the consequences of a price war. Their threats had been ignored.

Saudi Arabia did not want an OPEC agreement in the Spring or early Summer of 1986. It knew other countries had been frightened but it thought fear would be an inadequate motivation for discipline. However if an agreement on production could be held off until the end of Summer, most oil exporting countries would by then have faced economic collapse. An agreement on production in OPEC and with non-OPEC exporters could then be reached which would have a good chance of enduring. Exporting countries would not forget the narrowly averted catastrophe. Prices could be raised and few would risk another price war by cheating.

Evolution in Saudi Thinking?

While I have no doubt that the Saudi reasons for taking their action were the ones they have given publicly, Saudi thinking may have evolved since the first of this year. They have been pleased with the growth in demand for oil. They may, however, be deceiving themselves; it is unlikely that additional oil production can be equated with growth in the consumption of oil. Much of this oil, sold at extremely low prices, has gone into storage where it will be used against OPEC if a price rise is threatened. The Saudis have also been surprised at the decline in production in the high cost areas - particularly in the United States - and they now can calculate at least a partial return to a position of greater political and financial authority. They could not have imagined such a possibility a year ago. The Saudis are also pleased at the decline in exploration budgets of major oil companies and they are delighted, although surprised, at the unwillingness of the United States to protect its domestic industry.

Last year the Saudis talked about a quick restoration of the official OPEC price; $28 was to be reached by the end of 1986. They are less sanguine today; Ahmad Zaki Yamani has been quoted recently by the press as saying it will be "many years" before that price will be seen again. The Saudis may in fact want to limit the price rise to $20/barrel, with the rise back to $28 delayed sine die. This would assure a restoration of OPEC's dominance of the world oil market. It would however run counter to the aims of a number of other oil exporters who have great needs for high income now and who will do everything they can to insure that such a Saudi plan - if there is, in fact, such a Saudi plan - is not implemented. $20 might be acceptable to most in OPEC for 1986; but most will insist on a much higher price in 1987 - not in the 1990's when many will have little to export.

U.S. Position

The United States in its official pronouncements and in the position taken by Vice President Bush with the Saudis strongly favors the "market approach" to oil; i.e., there should be no government interference in the market; the cheapest producers should dominate. Were Saudi Arabia to take this seriously and raise its production to 8 or 10 mb/d, as it could in a short time, the price of oil would drop to $4/barrel. It would mean closing most of the North Sea and much of the American production; oil would be supplied by a few low cost producers in OPEC.

Of course, their resources would be depleted rapidly and it is difficult to see how even Saudi Arabia or Kuwait could gain by this, even financially, even though their relative position in the world oil scene would be very strong. Little of the American oil industry would survive a long period of $4 - or even $10 oil. While every American oil man and geologist understands this, their views are dismissed by the politicians as "biased" and "self-serving", and our leaders listen only to the song of the siren economists who sing that the oil glut is permanent and prices will stay low through this century.

The Lingering Death of OPEC

We have not seen a truly free market in oil for over 50 years and it is unlikely we will again until oil supplies are insufficient to meet demand - in 10 or 20 years, if we are lucky, that is, if prices do not stay very low. Should OPEC fail in its current and future efforts to restrain production and prices drop below $10, supply and demand could come much more quickly into balance. When they do, prices will rise sharply. There are, of course, restrictions on oil production today. The "cartel" is still functioning to a certain extent. The question facing the world is will OPEC be able to reconstitute its authority enough to increase prices significantly? Conventional wisdom, shared by almost everyone in the industrialized world, is that it cannot; the period of current low prices will be a long one. OPEC is a cartel and no cartel endures. Another phrasing has it that "Once a cartel is broken, it can never be restored." The formula used in the west repeatedly - Wall Street Journal, New York Times, Economist of London, Financial Times - is simple:

1) All oil exporters need money.

2) They will try to get it by increasing their production.

3) This will drive down oil prices, thereby decreasing their income.

We make this calculation openly and assume that no one in OPEC is able to do the same. We err; all exporters do make the same calculations, only they reach different conclusions. They need more money, and here they agree with the western syllogism. There is no question that all members of OPEC, even including Saudi Arabia, believe that the only hope for themselves and for the Organization is to reduce production, to re-establish quotas in OPEC, and to work out cooperative arrangements with the non-OPEC exporters of oil.

This will not be easy but it also should not be insuperably difficult. We are talking about cooperation among 23 countries: 13 in OPEC and 10 outside of OPEC who have a common interest in increasing their income. Obtaining a "fair" market share is important; increasing income is vital. Failure to cooperate in decreasing exports would mean disaster for most exporters in and out of OPEC. All know this. All are determined to survive.

OPEC's Plans

One plan discussed in OPEC in the last few months has been for OPEC to cut its production by 15-20 percent and for non-OPEC exporters to reduce their exports by 20 percent. This would create a shortage in the world of about 8 percent, a shortage never before seen. If it were maintained, prices would quickly rebound to the official OPEC price of $28 or even higher - assuming OPEC wished it to do so. If Saudi Arabia has decided to limit the price increase to $20, it could increase exports or propose that others increase their production as soon as that limit is reached.

The July preliminary agreement did not go that far. OPEC agreed to cut its production about 10 percent below current levels and the non-OPEC exporters were asked to cut their exports about 10 percent. All important exporters of oil outside OPEC have now agreed to cooperate with OPEC and cut production excepting only the United Kingdom. It is hoped that these cuts will be sufficient to bring available supply down the current demand level. They might, but it would probably take a year or two to do so. Most in OPEC have no illusions about this and there was an explicit agreement to consider further cuts both in and outside OPEC if there is not a quick rise in prices. This proposal will be reviewed at the October meeting. The cuts will have been in effect only one month and it is difficult to see how they could have had much effect in that short a time. Most probably the real agreement with OPEC cuts up to 20 percent and non-OPEC exports cut by 20 percent will be reached later this year or early 1987.

Animosity Against Saudi Arabia

This brings us to another serious political risk in the area. I have already referred to the widespread belief that Saudi Arabia's actions are in response to American pressure or spring from a desire to deprive Iran of its oil income. But even if the Saudi moves were for the logical, relatively benign reasons that have been publicly expressed (and I am convinced they were), the Saudi net-back sales plan incontestably resulted in the break in oil prices in February of this year. The Saudi position is that the cheaters in OPEC and the greedy non-OPEC exporters bear the real responsibility for the price collapse. The Saudis, of course, are correct. Unfortunately, few believe them; unimpassioned discussion of this subject has been suspended in OPEC. Saudi Arabia, with the largest oil reserves and with a great variety of possible alternative approaches to oil production, is believed to have deliberately and maliciously hurt its OPEC colleagues. It has incurred the bitter enmity of many of its OPEC colleagues. Whether this hatred is lasting depends on what happens to oil prices this year and next. Political or even military action against Saudi Arabia or sabotage of Saudi oilfields would not be surprising if prices stay low. When the Iraq-Iran War ends, it is not conceivable that Saudi Arabia will be able to persist in a policy of keeping oil prices low. Neither Iraq or Iran favors it; and when the two largest countries in the Gulf stop neutralizing each other, the oil scene - as well as the Middle East political scene - will be vastly different.

There are, of course, many in Saudi Arabia itself who are not pleased with the current Saudi oil policy. Saudi Arabia in doubling its exports since last year has seen its income decline. Many Saudis think that the official OPEC price should be restored; that it would be far better for Saudi Arabia to conserve its resources and sell much less oil at a higher price, an argument that is made in most OPEC countries.

The Fourth Oil Shock

If prices stay low for a few years and world oil reserves decrease to the point where the Persian Gulf covers 60-70 percent of world demand, a sudden curtailment of production in the Persian Gulf or in any other of the remaining producing areas would result in a physical shortage (not a political or contrived shortage as in 1973-74 or 1979-80) and a drastic price increase to $50 or higher. This would be an economic shock to the world greater than that of 1979-80. The economic and political consequences would also be more severe. Were that to happen, the United States would surely re-examine the old widely discussed plan to occupy Arab oilfields from Kuwait to Abu Dhabi. Invasion would not create any new oil but the Arab oil could be extracted at capacity with no worry of the future; there could be stability and reasonable oil prices (although not $10/barrel) for the next generation or so. By that time, it would be hoped, alternative energies could be developed. Or there could be a new scientific breakthrough.

Invasion would not be risk-free. The Soviet Union might not acquiesce. The Arab inhabitants of the peninsula might not allow themselves to be deprived of their wealth. They might put the oilfields out of operation. Perhaps they could not be successfully expelled from the oil provinces. The proposition that invasion would be quick and easy is daring. If it is wrong, there could be world economic collapse. There could be a world war.

Cooperation Not Confrontation

In 1974, Ahmad Zaki Yamani, the Saudi Oil Minister, proposed a consumer-producer dialogue on oil, finance and related matters. This was rejected by the United States which thought at the time (as today) only of breaking OPEC - not talking with it. The French and the Algerians insisted on a much wider discussion; oil was one area where the LDC's had influence and they should use it to obtain concessions from the industrialized world: technical assistance, loans, trade preferences. The North-South dialogue accordingly was launched. The United States cynically agreed to participate. Henry Kissinger thought (correctly) that such a dialogue would be so large and complicated, it could be talked to death. This was efficiently done; nothing was accomplished. The consumer-producer dialogue on oil, which had some chance of success, was never started.

The Saudis, under Ahmad Zaki Yamani, then embarked on their own "long-term strategy". It has now been overtaken and largely abandoned even by the Saudis. It seemed at the time the only hope of avoiding the economic and political consequences of a violently fluctuating oil market. It still seems so. The plan, to recapitulate, was the freezing of oil prices (in current dollars) at $28/barrel for a few years; i.e., a declining price in real terms. This would be followed by another period of a constant price in constant dollars. Then sometime in the 1990's, there would be a gradual increase of the oil price in real terms, with the limit set sometime in the next century by the cost of production of synthetic liquid hydrocarbons.

Saudi Arabia and the other countries of the GCC, Iraq, Iran, and Venezuela - all with large oil reserves - would have benefited from a stable market and the possibility of selling their crude long into the future. Other exporters, with more limited reserves, would have sold at higher prices today; not extremely low prices today and then much higher prices in a decade or two when they had little left for export. Consumers would have benefited from reasonable prices over a long period of time. The search for alternative energy would have been resumed; the search for oil wherever it could be found would have continued. The world would have benefited from stability. It would have avoided the present chaos.

OPEC has a good model to follow. With the discovery of oil in East Texas in the late 1920's, there was for the first and last time a true "free market" in oil and its price declined to 10 cents/barrel. Then with restrictions on production in Texas and other important oil-producing states, the price rose back to $1/barrel. The United States and the world benefited for the next 40 years with a plentiful supply of oil at a reasonable price. California never participated, yet the cartel worked. Similarly, the U.K. can if necessary be excluded from any system of coordination on production. An exporters' agreement without the U.K. could still be highly efficient.

Conditions have changed since pro-rating was instituted in the United States. Another 40-year period of stable low prices is probably not possible, given the high consumption levels and relatively low level of oil reserves compared with consumption. But a 20-year period of stability is not inconceivable: 20 years of reasonable prices starting at (say) $25/barrel, and then a gradual rise as we shift to the post-oil era when conventional oil is ultimately exhausted.

The Immediate Future

Before the last OPEC meeting the United Arab Emirates (UAE) with a population of 1 million demanded an increase in its quota by 40 percent - something rejected by all other OPEC members. Iraq wanted its quota doubled. All others (except Iran) agreed Iraq should have a substantial increase but not a doubling. Iran maintained that Iraq should have no increase, or if it got any, Iran must have double the amount. The problems were not too difficult to resolve. Political pressure was placed on the UAE and it withdrew its excessive demand. Iran proposed excluding Iraq from OPEC quotas and said if Iraq exceeded its old quota, Iran would take measures - military or sabotage - to reduce Iraqi exports. Iraq has, in fact, increased exports, but not to the level it had demanded.

The need for cooperation is understood by all. If Iraq and the UAE produced at their desired levels and the price war continued, their incomes would be considerably less than if they had no quota increases and sold at the official $28/barrel - or even at $20. This arithmetic is simple; the OPEC oil and finance ministers are, with only a few exceptions, men of intelligence and wisdom who see what has to be done and will do it. Better to get a higher income than to demand a higher quota and sell below $10/barrel. But perhaps I exaggerate the abilities of several of the ministers.

I have three laws of Mideast politics. The third is that in any rational conflict between a pessimistic and an optimistic interpretation or prognostication of events, the pessimistic one is always right. I fear, therefore, that the next agreement will not last. While I have little doubt that an agreement will be reached in October or later this year, there could be cheating again. Following Yamani's original sequence of events, some countries will forget their fear and their pain - the actual period of low prices has not been long - and will try to make sales beyond their OPEC quotas. As it will not be possible to keep this secret, Saudi Arabia and the others in the GCC will then take action resulting in a second price war, prices will collapse and the oil exporters will once again face catastrophe. This time the pain will be so great that there will be an extremely good chance that the agreement they reach will last for as long as necessary, i.e., ten or twenty years, until physical supply and demand are in balance. In other words we could see a year or 18 months of violently fluctuating prices before the agreement is reached. 18 months is not long but it would be one of the worst developments I could imagine. There would be revolutions in a number of oil exporting countries; confidence in the oil industry and related financial markets would be destroyed; it would probably be five years before the industry could resume the search for oil and for alternatives. There could then be real shortages and a much higher price for oil before the end of this decade.

This need not be so. OPEC is not our hereditary enemy. We can and must live together. Ultimately we have the same goal: a stable supply of oil at a reasonable price. Price stability at around $25/barrel is attainable. It would be good, theoretically, if major consumers were to encourage OPEC to move in this direction. Of course, they will not do so: European, American and Japanese "statesmen" will not decide to cooperate with OPEC; they still cherish the belief that cheap oil is both good and permanent. If stability in the oil market is reached, now or even in a year or two, it will only be because a few men in the oil exporting countries, both in OPEC and outside it, acting exclusively in their own interest, have decided that the current chaos must end. They will succeed, ultimately, because the consequences of failure - economic collapse - are intolerable to all of them. Fortunately what is good for them is in the long-term interest of the world.

The CHAIRMAN. Thank you very much.

Mr. Unsell.

STATEMENT OF LLOYD N. UNSELL, PRESIDENT, INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

Mr. UNSELL. Thank you, Mr. Chairman.

I am pleased to be here in behalf of the surviving independent oil and gas producers.

I would say to you, Mr. Chairman, that if there is a group in this country that is looking for a promising result, it has to be the independents in this industry.

I would like to comment on some of the earlier discussion. We had some discussion about conservation and conservation is essential and makes sense, and about the strategic petroleum reserve, and that is essential and makes sense as a short-term buffer for short-term emergencies.

But there is no way in this country that we can either conserve or store enough energy to assure the long-term or even the intermediate-term security of this country. The only assurance of energy security for America is to have robust, growing, profitable enterprises producing energy—oil, gas, coal, nuclear, and all the rest. And we do not have that today, as you know.

You mentioned in the statement you read earlier, Mr. Chairman, the small group of men in the world who could, by acting in their self-interest, restore stability. I would like to say that I think we have reached a point in this country very quickly where it does not make any difference what that little group of men does or does not do. I say that for the reason that I don't know who in this room, except for me, coming from Oklahoma, has ever been in a town that has just been devastated by a tornado. But the domestic petroleum producing industry has been devastated by an economic tornado in the last 8 months, and its members are groping for answers.

Now, I must say that the industry has not come forth with any answers. There has not been a developing consensus, just as there is no political consensus. But I think that every independent oil producer in this country would agree with me when I say that it does not make any difference what OPEC does tomorrow or whether they reach an agreement that is successful or not. We have had demonstrated to our people, who do most of the drilling, who found most of the oil and gas in this country for 125 years, that you have to have stability and that stability cannot be assured in the oil world today.

That rug can be jerked out from under you any time.

So, in my view, what we desperately need, not just for oil and gas, but for coal and all the rest—and Senator Ford may or may not have read the very large article in the Journal of Commerce today based on interviews with analysts of coal about coal's long-going cost-cutting and retrenchment attributable to trying to compete with low oil prices.

The CHAIRMAN. Mr. Unsell, will you permit me to interrupt for just a moment.

I apologize for doing so. But I have another commitment for a little while. Senator Nickles will chair in my absence.

I should, perhaps, before I go, make a confession as well as a statement. I think it is fair to say that the statement that I repeated a moment ago with respect to a handful of people in oil exporting companies, to a few men being able to decide in their own interest, comes from the statement by Ambassador Akins. I thought that before leaving I should tell everyone that that is where it came from. That statement is in the record.

I would also commend that entire statement to everyone who is interested in the problem that we have. It is a remarkable document detailing the history of how we got to where we are, and it has some insights into where we will go if we do not change.

There are recommendations involved in that statement. I think it is a startling thing to indicate, but an accurate thing to indicate, Mr. Ambassador, that the decisions that will affect the outcome are going to be made by producing nations. That simply cannot be in the long-term best interest of the United States, to simply allow producing nations to determine the outcome of something that is so crucial to our security and to our economy.

In the time before I leave, I want to underscore something else.

It is absolutely necessary to understand the point that you made, which is that marginal shifts in supply and demand produce massive shifts in price.

Now 1979, you pointed to. If I recall the figures correctly, the world had a marginal surplus of oil in 1979, a capacity that was slightly larger than demand, about 55 million barrels a day of production. The Iran-Iraq War produced a temporary reduction in Iran's supply of about 1.5 million barrels a day—no, of about 4 million barrels a day—and a permanent reduction of something on the order of 1 million to 1.5 million barrels a day. We went from a marginal surplus to a perceived marginal shortage, and the price of oil doubled overnight.

It is not just a small economic shift when there is a very small shift in supply. That volatility is evidence of the absolutely crucial nature, in both economic and production terms, of adequate supplies of energy available to the industrial world.

There are a lot of other lessons, but I did want to take this time not only to reveal the source of that quotation, but also to commend everyone to a reading of Jim Akins' very, very thoughtful and very precise, very accurate, and very stimulating statement that has been filed here for the record.

I do not mean to detract from any of the other statements that have also been produced. But I think it is a remarkable document.

And thank you, Mr. Unsell, for permitting me to interrupt. I apologize again for that, and I apologize to all the witnesses for a temporary absence. I will be back shortly.

Senator Nickles [presiding]. Mr. Chairman, I compliment you on your remarks. Also, I appreciate this hearing.

Mr. Unsell, please continue.

Mr. Unsell. Well, I was about to say in a summary that I agree with Ambassador Akins also, that there is no certainty in the world about whether OPEC can make an agreement stick or for how long it would be so, and what will happen in 5 or 10 years.

Therefore, I think we have reached a time in this country where we are somehow going to have to buy some insurance of some nature that will induce energy producers in this country to develop our own abundant domestic energy resources of all kinds. I do not know what form that insurance should be and I am not prepared here to tell you.

But I do think we have reached that point.

I would like to allude now to two or three perceptions that I think are not exactly helpful.

One has to do with the table on page 3 of my statement. It sort of refutes the apparent common assumption that the domestic oil producers have been the beneficiaries of OPEC level prices. This has never been the case.

It is important that this be understood in order to dispell the notion that some people have that independent producers are simply out to restore $40 crude oil prices.

I would call attention to only three or four facts that are illustrated by these figures.

Since late 1973, when OPEC almost quadrupled its prices, through 1985, the average realization per barrel for domestic crude oil has been $11.62.

Now that compares to $21.51 per barrel for the average landed price of imported oil in that 13 years.

In the peak year of 1981, when landed import prices averaged—and these are EIA figures—when imported oil averaged $36.52, the average per barrel realization for domestic producers was about half that, or $18.85.

Even before deducting royalties and production taxes and windfall profit taxes, the average price for domestic oil in the past 13 years was $16.53, only 76 percent of the average landed import price of $21.51.

Over these 13 years, domestic producers supplied the Nation with 25 percent more oil than was imported, but realized only 75 percent as much money as we paid in landed prices for foreign oil.

It is an irony that when OPEC began hijacking the world for oil, our Government said, in effect, this is no free market price and proceeded to extract $77 billion from the domestic petroleum industry with a "windfall profit tax" that was unrelated to either windfalls or profits.

Domestic oil was then, at that time, under rigid price controls. Then, when OPEC market disciplinarians decided to collapse world oil prices, many said now let's let the free market work.

So, whether OPEC is manipulating prices up or down, it is the domestic independent producer who pays and pays dearly.

The achievements of domestic petroleum explorers after 1979 refute what many were then saying could not be done.

As chart 1 in my statement shows, the average daily production of crude oil in the lower 48 States dropped by 2 million barrels a day between 1973 and 1980. That is just 7 years. But the accelerated drilling program that had its onset in 1978 not only halted this decline, but resulted in moderate production increases by 1984 and 1985.

Because of this effort, in combination with meaningful conservation, our import dependence was reduced from more than 45 percent in 1979 to about 30 percent of requirements in the past 4 years.

This turnaround in domestic production occurred because the industry was drilling and completing more than 38,000 new oil wells per year. Because industry revenues have been cut now in half, drilling has collapsed to the level experienced in 1940.

As a result, the production gains of the past 5 years already have been wiped out, as shown in chart 1 of my statement, and we are heading back on that decline curve which persisted in the 1970's.

Chart 2 in my statement shows the domestic crude oil production paths that could be assumed at prices of $13, $20, and $27 a barrel.

These projections are based on a continuing analysis which we do in the IPAA of the drilling-production response stimulated by each billion dollars of spendable money available to the domestic industry.

A continued inadequate price would unavoidably reduce production to under 6 million barrels a day by 1995, and, as a result of that, we would be some 60 percent import dependent by that date.

A price close to that experienced in the recent past would limit import dependence, as shown in chart 3 of my statement, to around the 35-percent mark.

Now, we believe, as a nation occupying a leadership role in the world, that it is clear that such levels of import dependence—60 percent prospectively for basic energy supplies—that dependence on unstable and often hostile governments for such basic energy supplies could be exploited to compromise our diplomatic and strategic options, interests, and objectives in the world.

The word "stability" is now being interpreted by some as a code word for high oil prices. But this is an incorrect assumption, and I would cite two reasons why some means of restoring economic stability is so critically important.

Not long ago, I met for an afternoon discussion with a group of banking officials in Oklahoma, all experiencing severe threats to their existence because of failed or failing energy loans.

Some of these officials were frank in saying that the petroleum industry-banking relationships that have been both healthy and productive for half a century may have suffered some permanent damage.

One officer of a major bank in Oklahoma said to me, and I quote:

> If Saudi Arabia can collapse the price from $26 to $10 so quickly, it could be collapsed to $5 a barrel or even $3. So there is no longer any basis for evaluating crude oil as a bankable collateral and will not be until we can again see some reasonable stability in the marketplace.

Since the option of borrowing to drill is no longer available to the independent producer and changes in tax laws have almost eliminated private venture capital from high-risk, capital-intensive activity, such as wild-catting, this limits most independents to internally generated cash flow for operating capital.

Internally generated funds for many experienced, long-term and successful independents are inadequate even to cover their debt obligations, a fact that has been widely publicized.

Another fact which underlies the necessity for stability is the domestic petroleum industry, producing the world's highest cost crude oil, is least equipped to cope in even a stable market, much less an unstable market, as shown by only a cursory examination of the table on page 8 of my statement.

These figures compare the productive capabilities totally and per well for a random selection of producing countries. As you will note, the United States, rounded off at 14 barrels per day per well, actually produced 13.8 barrels per well last year, while Iran produced 9,526 barrels per day per well.

The ability to compete in the world oil market clearly is not determined, as in some industries, by wage negotiations, product quality, production efficiencies, and the like. Instead, the ability to compete or not in either a stable or unstable market atmosphere was long ago determined by nature through the happenstance of geological distribution of resources.

So, stability is vital to the high cost competitor, and in the oil business, that is the domestic petroleum industry in the United States.

I want to note the recent action taken by the House to repeal the Fuel Use Act and incremental pricing, both of which I would say, in addition to Senator Ford's concern about coal capability, everybody I know believes that those actions would permit natural gas to displace substantial quantities of imported oil.

We have long advocated this action, but hoped it would be part of a more comprehensive bill addressing open access transportation, well-head decontrol plus provisions permitting formation of independent producer marketing cooperatives and mandating market based price royalty on public lands.

We hope the Senate might consider a more comprehensive approach than what the House has done, but absent time to do that, at a minimum, we would urge you to adopt the House passed bill.

I have to admit now, Mr. Chairman, to the committee that while my statement presents some elements of the problems and some of the questions as we see them, I am unfortunately not able to provide any answers.

Our chairman just recently appointed an emergency action task force of 18 long-term, experienced individuals in our industry with a mandate to develop and recommend actions to try to revitalize the domestic oil and gas producing and drilling industries. The task force met recently in Washington for thorough discussions with Cabinet and sub-Cabinet level officials from the Departments of State, Commerce, Energy, and Interior, and the Office of the National Security Adviser, along with the Federal Energy Regulatory Commission.

This group will again be in Washington for similar discussions next week.

No action or actions are excluded from consideration, and the task force will continue to seek and consider all meaningful views and advice, with the objective of reaching conclusions and arriving at specific recommendations before this association's annual meeting at the end of next month.

It is our hope and expectation that this effort will result in strategies that the industry, the administration, the majority in Congress and among the public will see as logical, supportable, and essential to our energy future.

That concludes a summary of my statement, Mr. Chairman.

[The prepared statement of Mr. Unsell follows:]

Statement of
Lloyd N. Unsell, President
Independent Petroleum Association of America
Before the
Senate Energy Committee
September 18, 1986

The opportunity to appear here in behalf of the 6,000 members of the Independent Petroleum Association of America - the explorers who have found the major share of U.S. crude oil and natural gas reserves - is very much appreciated.

This hearing could not be more timely. The subjects and considerations on which the Committee is seeking information concern, in essence, the current and prospective status of our Nation's energy security. This, we believe, is one of the most critically important and potentially disastrous problems confronting America and Americans.

We are a Nation possessing a mix of energy resources adequate to fulfil our needs for the foreseeable future. But we are at this moment moving in the direction of potential energy shortages far worse than anything experienced in the past. We are in this unacceptable position because we have permitted - and are permitting - a foreign government cartel to decide the economic viability of our domestic energy resource development.

Through the device of manipulating the supply and price of oil, the OPEC cartel is committed to two principal objectives: (1) eliminating the marginal high-cost production of petroleum hydrocarbons, and (2) preventing the development of energy alternatives which could compete with or displace oil in the world market. These are announced goals that various OPEC oil ministers have defined over the past few months.

We should understand that the United States stands at the top of the list of countries most vulnerable to this OPEC strategy: First, because domestic oil is the highest in cost on the planet, and secondly, because no other country has a greater need to find the essential economic/technological breakthroughs for large scale production of synthetic and other energy forms to assure adequate future defense energy supplies within our own control. It is therefore imperative that we soon find and implement an effective antidote for OPEC's control of development of energy resources through its dominance over oil supplies and prices.

Today, due in large part to the price collapse deliberately engineered by Saudi Arabia, the domestic oil industry in the United States is an economic wasteland. While the industry always has been cyclical, the instability it has experienced in 1986 has no parallel in all its past experience. This instability derives from the machinations of foreign governments which have demonstrated their ability to escalate or de-escalate world oil prices at will, to serve their own interest and purposes.

We believe it to be inimical to both the public and the national interests when such an essential industry can be devastated by economic warfare conducted by foreign government cartels. No other basic American industry has experienced such total economic disarmament at the hands of foreign governments intent on economic hostility. This is a new experience in our international relationships.

At this point, I think it appropriate to acknowledge that some of our clever columnists observing this situation have had a little misguided fun with their usual cynicism. The gist of such observations has been that "domestic oil producers raised no complaints when OPEC raised prices to near $40 a barrel; only when the price collapsed to the great joy of consumers were they heard from."

Contrary to the impressions created by such commentaries, domestic, producers have at no time been the beneficiaries of OPEC-equivalent prices. In 1979 when the Iranian oil shutdown precipitated a near doubling of world prices, U.S. crude oil prices were under rigid price controls. The 1979 average U.S. crude oil price was $12.64, but after royalties and state production taxes, the average net to producers was only $10.10 a barrel. By contrast, the average landed cost of imported oil was $21.65.

From the following table, I wish to point out some critical facts:

CRUDE OIL PRICES
DOMESTIC VS. IMPORTED
1973-1985

$ PER BARREL

	AVG. U.S. WELLHEAD 1	AVG. U.S. ROYALTY 2	AVG. STATE PROD. TAX 3	AVG. WINDFALL PROFIT TAX 4	NET PRICE TO PRODUCER 5	AVG. LANDED IMPORT PRICE 1
1973	3.89	.58	.20	0.00	3.11	3.83E
1974	6.87	1.03	.35	0.00	5.49	12.02E
1975	7.67	1.15	.39	0.00	6.13	12.45
1976	8.19	1.23	.42	0.00	6.54	13.34
1977	8.57	1.29	.44	0.00	6.84	14.31
1978	9.00	1.35	.46	0.00	7.19	14.38
1979	12.64	1.90	.64	0.00	10.10	21.65
1980	21.59	3.24	1.10	2.70	14.55	33.95
1981	31.77	4.77	1.62	6.53	18.85	36.52
1982	28.52	4.28	1.45	4.50	18.29	33.18
1983	26.19	3.93	1.34	2.89	18.03	28.93
1984	25.88	3.88	1.32	2.33	18.35	28.46
1985	24.07	3.61	1.23	1.67	17.56	26.60
AVERAGE	16.53	2.48	.84	1.59	11.62	21.51

SOURCE: 1-EIA
2-AVERAGE ROYALTY 15%
3-AVERAGE PRODUCTION TAXES 6%
4-IPAA-ESTIMATES
5-INCLUDES ALL OTHER FEDERAL, STATE AND LOCAL TAXES

1) Since late 1973 when OPEC almost quadrupled its prices, through 1985, the average realization per barrel for domestic crude oil has been $11.62 per barrel, compared to $21.51 per barrel average landed price for foreign oil.

2) Since 1979, in the years of OPEC high prices, domestic producers have realized an average of $17.61 per barrel, only 56 % of the $31.27 average landed cost for imports.

3) In the peak year 1981, when landed import prices averaged $36.52, the average per barrel realization for domestic producers was about half as much, or $18.85.

4) Since 1980 domestic producers paid $77 billion in "windfall profit" taxes and $8.3 billion in state production taxes, and no comparable taxes were paid on imported oil.

5) Even before deducting royalties and production/WPT taxes, the average price for domestic oil in the past 13 years was $16.53, only 76 % of the average landed import price of $21.51.

It is important to realize that in these 13 years, Americans paid $656 billion for 30.5 billion barrels of foreign oil landed in the U.S. By contrast, the realization to domestic producers for 40.9 billion barrels of oil was $477 billion. In other words, for 25 % more oil, domestic producers realized only 75 % as much money, relative to the cost and supply of foreign oil.

Mr. Chairman, I think these facts should put to rest the idea that domestic oil producers have "pocketed" the equivalent of OPEC prices for their oil. Nothing could be further from the truth, and I think the above tabulation puts into perspective the fact that the lowest cost source of energy for Americans is and has been by far the domestic petroleum industry.

We view it as an irony that when the petro-imperialists of OPEC began hijacking the world for oil, our Government said, in effect, "this is no free market price" and proceeded to extract $77 billion from the domestic petroleum industry with a "windfall profit tax" that was unrelated to either windfalls or profits. As already pointed out, domestic oil was under rigid price controls at the time. Then when the OPEC market disciplinarians decided to collapse world prices, many said, "let the free market work." So whether OPEC is manipulating prices up or down, it is the domestic producer who pays and pays dearly.

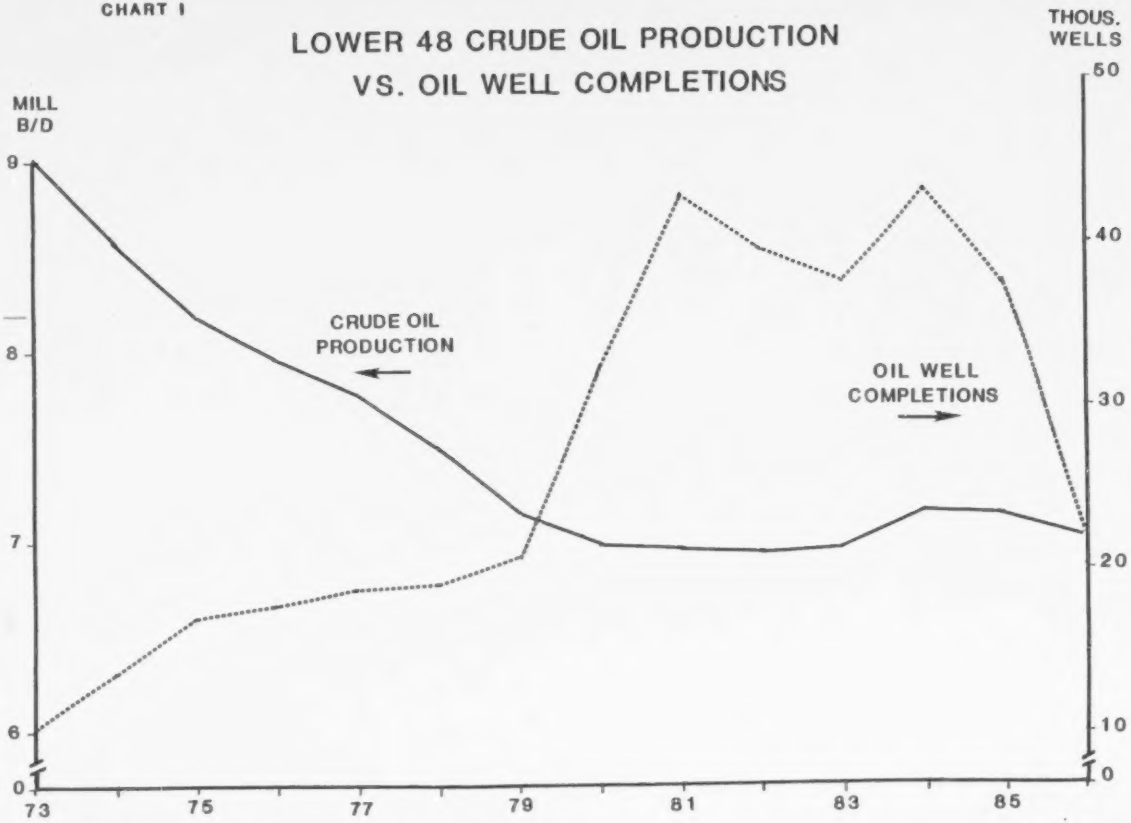
We are now asking two legitimate questions to which answers must soon be established: "Does this country need reliable energy supplies within its own control? Is it contrary to the national interest to become irretrievably dependent on oil produced in the most politically unstable spot on the globe, the Persian Gulf?" If the answers to these questions are "yes," then we simply say, "The domestic oil and gas producing industry cannot do its job without some reasonable expectation of market stability."

What is our prospective petroleum supply situation if we do not revitalize domestic petroleum exploration/development? The short answer is that we are headed for an unavoidable repeat of the shortages experienced in the 1970's, only far worse. And such shortages would logically be followed by price escalations perhaps in excess of the highest prices in all past experience.

The achievements of domestic petroleum explorers after 1979 refute what many were saying couldn't be done. As Chart I shows, the average daily production of crude oil in the lower 48 states dropped by 2,000,000 barrels from 1973 to 1980, a brief seven years. But the accelerated drilling program that had its onset in 1978 not only halted this decline but resulted in moderate production increases by 1984-85. Because of this effort, in combination with meaningful conservation, our import dependence was reduced

CHART I

LOWER 48 CRUDE OIL PRODUCTION VS. OIL WELL COMPLETIONS



Source: EIA, API, IPAA

Note: 1986 wells estimated; 1986 production year-to-date.

IPAA Chart
September 1986

from more than 45 percent in 1979 to about 30 percent of requirements in the past four years. Even more important, the primary sources of U.S. imports in this period were stable, close-by Western Hemisphere neighbors Mexico, Canada and Venezuela, and the British North Sea.

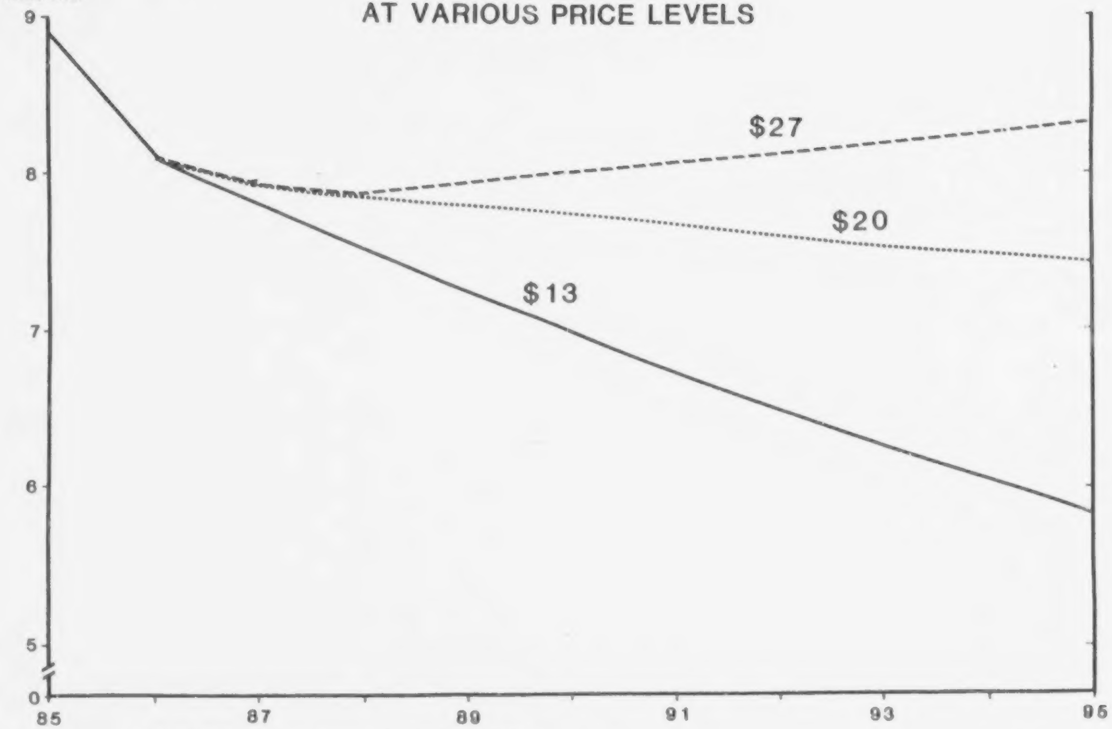
These gains, as Chart I also shows, have been wiped out by the price and drilling collapse of 1986. The turnaround in domestic production occurred because the industry was drilling and completing more than 38,000 new oil wells per year. Because industry revenues have been cut in half, drilling has collapsed to the level experienced in 1940. The number of completed wells is falling precipitously and oil well completions this year will be back below the 1979 level. As a result, the production gains of the past five years already have been wiped out and we are heading back on the decline curve that persisted in the 1970's.

Chart II shows the domestic crude oil production paths that can be assumed at prices of $13, $20 and $27 per barrel. These projections are based on our continuing analysis of the drilling/production response stimulated by each billion dollars of gross revenues generated by the industry. A continued inadequate price would unavoidably reduce production to under 6,000,000 barrels a day by 1995. A price close to that experienced in the recent past, by contrast, would result in maintenance of production that would limit import dependence (as shown in Chart III), to around the 35 percent mark.

Even if the price recovers within the next year and investor confidence is partially restored, it would take almost a decade to overcome the financial/operational reverses experienced by the industry and bring domestic production back to current levels. Unless this happens, imports will increase progressively and will represent 60 percent of our requirements by the mid-1990's.

CHART II

PRODUCTION PATHS AT VARIOUS PRICE LEVELS

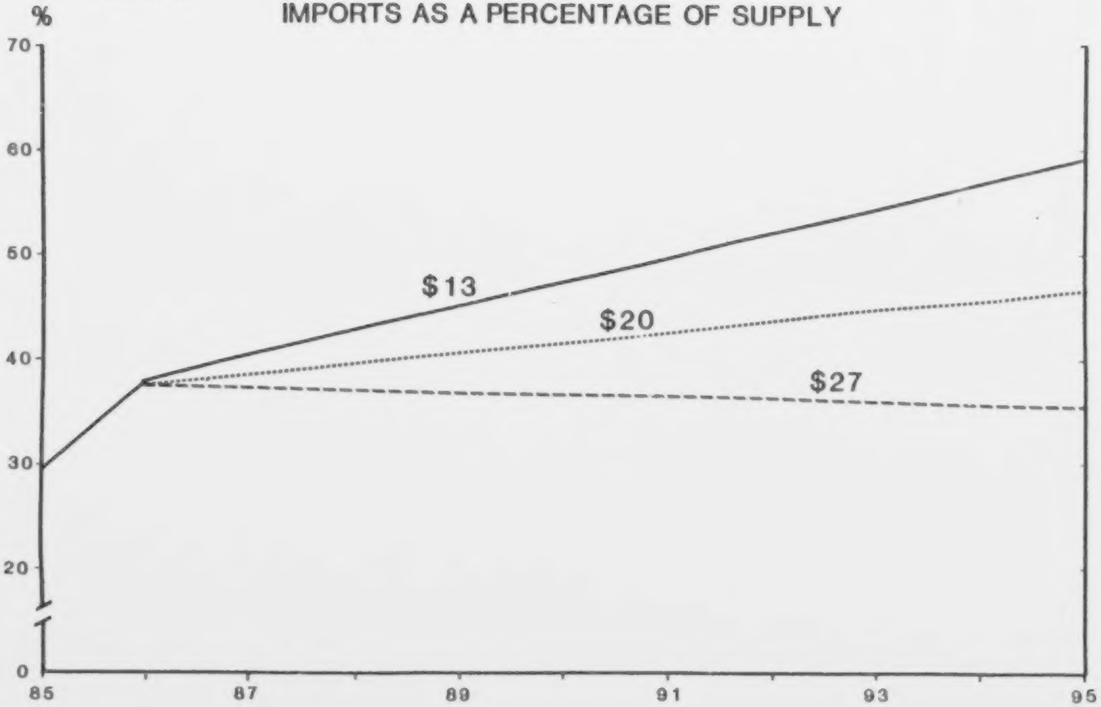


Note: 20% of gross revenue reinvested each year
Cost of drilling-$325 thous./well

IPAA Chart
September 1986

CHART III

IMPORTS AS A PERCENTAGE OF SUPPLY



Note: Demand Increase
$13 case–2%
$20 case–1%
$27 case–No change

IPAA Chart
September 1986

As a Nation occupying a leadership role in the world, it is clear that such levels of dependence for basic energy supplies on unstable and often hostile governments of the mideast would be unacceptable. The issue is not just the health and welfare of domestic oil producers; the issue is the economic and military security of the United States in the 1990's and beyond. Irreversible dependence on Persian Gulf oil would be a gun at our head that could not help but compromise our diplomatic and strategic options, interests and objectives, in the Middle East and in the world.

I want to talk briefly about the need to find as quickly as possible the means of restoring stability to the domestic energy situation. Already, the word "stability" is being interpreted by some as a code word for "high oil prices." This is an incorrect knee-jerk assumption, and I would briefly explain why.

Not long ago I met for an afternoon of discussions with a group of banking officials in Oklahoma. Everyone in the group represented financial institutions experiencing severe threats to their existence because of failed or failing energy loans. Some of these officials were frank in saying that the petroleum industry/banking relationships that have been both healthy and productive for a half century may have suffered permanent damage. Having witnessed a foreign government manipulate the world and domestic crude oil price down by more than 50 percent in a few weeks, thus throwing thousands of energy loans into default, such conclusions by managers of financial institutions should come as no surprise. One officer of a major bank said to me: "If Saudi Arabia can collapse the price from $26 to $10 so quickly, it could be collapsed to $5 a barrel, or even $3, if they choose. There is no longer any basis for evaluating crude oil as bankable collateral, and will not be until we can again see some reasonable stability in the marketplace."

Since the option of borrowing to drill is no longer available to the independent producer, and changes in tax law have almost eliminated private venture capital from such high-risk, capital intensive activity as oil and gas "wildcatting," this limits most independents to internally generated cash flow for operating capital. Internally generated funds for many experienced, long-term and successful independents are inadequate even to cover their debt obligations, a fact that has been widely publicized.

Another fact which underlines the necessity of stability is that the domestic petroleum industry, producing the world's highest cost oil, is least equipped to cope in an unstable market. It does not take a docterate in economics to understand this, only a cursory examination of the following table. It is a fact that the United States was not naturally blessed with the likes of Saudi Arabia's Ghawar oilfield, the world's most prolific. Instead, our oil producing capability was developed by tens of thousands of explorers finding tens of thousands of relatively small oil deposits across the Nation. The figures below compare the productive capabilities, totally and per well, for a random selection of producing countries. The U.S. in 1985 produced 13.8 barrels daily per well, compared with 9,526 barrels per well produced in Iran. Canada is the next "most marginal" producer in the world, though producing three times the average per well output existing in the United States.

1985 AVERAGE CRUDE OIL PRODUCTION
U.S. VS. NINE REPRESENTATIVE COUNTRIES

	No. Producing Wells	BBDS/Daily Production	Daily output Per Well
Iran	237	2,257,750	9,526
Norway	145	802,875	5,537
United Kingdom	515	2,444,288	4,746
Abu Dhabi	410	798,000	1,946
Libya	1,024	1,050,000	1,025
Kuwait	371	939,000	2,530
Mexico	3,212	2,703,281	842
Venezeula	10,859	1,693,000	156
Canada	37,250	1,567,700	42
United States	646,735	8,916,700	14

SOURCE: WORLD OIL

The ability to compete in the world oil market clearly is not determined, as in some industries, by wage negotiations, product quality, production efficiencies, and the like. Instead, the ability to compete or not in an unstable market atmosphere was long ago determined by nature through the happenstance of geologic distribution of resources. I repeat, stability is vital to the highest cost competitor, and in the oil business that is the domestic petroleum industry in the United States. The cumulative successes of thousands of independent explorers have provided this country an energy abundance since late in the 19th century, and - given stability - still can and will provide the oil and natural gas to assure relative energy security.

Before I close, I want to note the recent action taken by the House. That action was to repeal of the Fuel Use Act and incremental pricing - both designed to open up new opportunities for domestic natural gas to displace increasing imports of oil.

We long have advocated this action, but hoped it would be a part of a more comprehensive gas bill which also addressed open access transportation, final wellhead decontrol plus provisions allowing the formation of independent producer marketing cooperatives and mandating market price based royalty on public lands.

We hope the Senate still might consider a more comprehensive approach, but absent time to do that, at a minimum we would urge you to adopt the House passed bill.

I must admit to the committee that while I have presented some elements of the problem and some of the questions as we see them, I am unfortunately not able to provide many answers. A few weeks ago, the Chairman of our Association, Mr. Raymond Hefner of Oklahoma City, appointed an Emergency Action

Task Force to develop and recommend actions to revitalize domestic oil and gas drilling/production. The Task Force, chaired by Mr. John Miller of Kalamazoo, Michigan, met recently in Washington for thorough discussions with Cabinet and sub-Cabinet level officials from the Departments of State, Commerce, Energy, Interior and the Office of the National Security Advisor to the President, and the Federal Energy Regulatory Commission.

The Task Force will again be in Washington for similar discussions for two days next week. No action or actions are excluded from consideration, and the Task Force will continue to seek and consider all meaningful views and advice, with the objective of reaching conclusions and arriving at specific recommendations before the Association's Annual Membership Meeting scheduled at the end of October. It is our hope and expectation that this effort will result in strategies that the industry, the Administration, a majority in Congress and among the public will see as logical, supportable and essential to our energy future.

Senator **NICKLES**. Mr. Unsell, thank you very much for your statement.

I have some questions for you, and I think I will go through the statement of the other panelists before I come back to them.

But one question first before we go to the other panelists.

In your chart on page 8, I do not see Saudi Arabia in there. I wonder about that. Has that figure dealt with the number of wells and their average daily production?

Mr. **UNSELL**. We were quibbling over that.

It was our understanding that Saudi Arabia drilled its 500th well in December, but World Oil now says they have 1,152, and so the data on that was not clear. But if it is 500, at their recent production rate of almost 6 million barrels a day, that would be 12,000 barrels per well per day

Senator **NICKLES**. Jim, did you want to add to that?

Mr. **UNSELL**. The Ambassador says it is over 1,100.

Ambassador **AKINS**. They have quite a lot over 1,100.

Senator **NICKLES**. They have over 1,100 wells, but maybe only 600 or 500 that are actually producing?

Ambassador **AKINS**. That's right.

Senator **NICKLES**. That was my understanding—that they had more wells, but were only producing off about 500.

Ambassador **AKINS**. They have about twice that.

Senator **NICKLES**. But actual production is only active on 500 wells. I wish we had a few of those wells in our State.

So, you are looking at 10,000 to 12,000 average barrels of production a day.

Ambassador **AKINS**. Not for Saudi Arabia. For Iran.

Senator **NICKLES**. I'm talking about the Saudis.

Ambassador **AKINS**. That's about 5,000.

Senator **NICKLES**. How many wells?

Ambassador **AKINS**. No—about 5,000 per well.

Senator **NICKLES**. Oh, 5,000 per well. How many active wells do they have in Saudi Arabia?

Ambassador **AKINS**. Well over 1,000.

Senator **NICKLES**. Thank you.

Mr. DiBona, welcome back to this committee.

I read in the Washington Post this morning where you had a statement or API had a statement concerning the volume of imports.

I am glad you are here because I was going to call you. I wanted to get some additional information on that.

Welcome again before the committee.

STATEMENT OF CHARLES J. DiBONA, PRESIDENT, AMERICAN PETROLEUM INSTITUTE

Mr. **DIBONA**. It is a pleasure to be here, Mr. Chairman.

I am, of course, representing the American Petroleum Institute, but my testimony is also given for the Rocky Mountain Oil & Gas Association.

I have a prepared statement and I would like to have it entered into the record.

Senator **NICKLES**. Certainly.

Mr. **DiBona**. I will give a kind of brief synopsis or summary of some of the points.

Senator **Nickles**. Thank you.

Can you pull the microphone up real close, because we do have some people in the back who want to hear you better.

Mr. **DiBona**. All right. I hope that is better.

Over the 6 months that have passed since I last testified before this committee, there have been some very substantial fluctuations in the world price of oil. But the analysis that I gave then still applies.

The depressed state of the domestic oil industry has, if anything, worsened since March. Employment in oil and gas extraction fell by 126,000, some 22 percent in the first 7 months of 1986. The count of active drilling rigs, though up slightly in the past 2 months, is still close to its lowest level since record keeping began in 1940. And it did hit the lowest level ever recorded a few months ago.

It represents an 85-percent reduction from the 1981 peak.

These figures describe an immense human problem. But I will address their ominous consequences for national energy security.

A decimated oil industry has significant negative implications for the Nation's ability to sustain domestic petroleum production. The need to preserve this ability remains vital at a time when oil prices remain only about one-half of those prevailing in recent years.

Such prices cause a combination of reduced non-OPEC oil production and increased worldwide demand growth that threatens to effectively absorb OPEC's current surplus production capacity in only a few years.

Marked supply and demand responses to current oil prices are already evident. Many stripper wells and other high-cost production facilities have been shut in, and domestic supply has declined some 300,000 barrels per day so far this year.

Senator **Nickles**. How many was that?

Mr. **DiBona**. 300,000 and that has been increasing all year. Almost all of these numbers are accelerating; that is, the decline in production is accelerating, the increase in demand is accelerating. They are all getting bigger.

So, the averages for the year understate the effects of the last few months.

Senator **Nickles**. Would that mean that our average daily production in the United States would be 8.6 million or 8.5 million?

Mr. **DiBona**. Yes; between 8.5 and 8.6 million.

Vital investment in the exploration and production has been cut dramatically, imperiling the Nation's future energy supply.

At the same time, the demand growth has picked up.

If low prices persist, encouraging these trends to continue, U.S. oil import dependence, recently in excess of 40 percent—the figures that you were mentioning—will increase further.

As growing world demand for OPEC oil reduces the level of excess capacity, world oil prices will once again be responsive to OPEC's wishes. Even the tentative and highly uncertain production agreement reached by OPEC last month served to stiffen prices under today's market conditions.

If, as seems likely, in just a few years world demand for oil imports once again approaches OPEC's production capacity, then both the probability and severity of sudden price increases and supply interruptions will increase.

I might add that I think some of the figures you have heard here today are optimistic. This is to say we estimate that even if OPEC managed to keep the price at $15 a barrel, roughly the current price, 80 percent of OPEC's capacity would be demanded in 3½ years, and 80 percent is roughly the number of OPEC's capacity that caused sharp price increases in the past.

When they get to about 80 percent, then the price starts rising rather rapidly. It will only be a few years after that before 100 percent of the surplus were used.

We are talking about 6 or 7 million barrels a day of capacity increase from OPEC before you hit the 80-percent mark.

Senator NICKLES. Let me interject if you don't mind, Mr. Chairman this thought.

The CHAIRMAN [presiding]. Go right ahead.

Senator NICKLES. We have total world production right now of around what—55 or 56 million barrels per day?

Mr. DIBONA. No, no. It is lower than that.

The total world production I think is something more like 40-some million.

Senator NICKLES. I am including the Soviet Union.

Mr. DIBONA. Oh. I was thinking of free world production.

Probably it is that with the Soviet Union.

Senator NICKLES. I include the Soviet Union. But OPEC production is how much?

Mr. DIBONA. It's on the order of 16 million or 17 million.

Senator NICKLES. Sixteen right now. They were producing closer to 20 million.

That is way short of 80 percent.

Mr. DIBONA. They did produce at one time between 30 million and 31 million barrels a day. There was some damage to some of the reservoirs, and so the estimate of what the current productive capacity is varies.

But most people think it is in the range of something like 26 to 30 million barrels a day. Eighty percent of that would be something on the order of 21 to 24 million barrels per day.

So, if you take 16 million to 17 million as the current production and 21 to 24 million as the 80 percent of the capacity, you know, you are talking about numbers that could be as low as 4 million and as high as 7 or 8 million. There is uncertainty in the numbers.

But the point is that a number like 6 million is probably a pretty good estimate of what additional capacity, if that additional capacity were absorbed, you'd start to get rapid rises.

Now, we think that at $15 a barrel, we did a survey of our members and asked them to tell us what they expected production to be, their production to be for four price cases in 2 years and 5 years.

The $15 case that we gave them, the numbers we got back for 1991 at $15 a barrel were 6.2 million barrels a day for U.S. production. Well, that is coming down from 8.9 million, or almost 3 million barrels a day down.

They also gave us figures for natural gas production. Those came down about 4 trillion cubic feet, which is roughly 2 million barrels a day of equivalent production of oil.

So that is down 5 million in those 5 years.

Meanwhile, we have seen consumption expanding fairly rapidly. For the year as a whole, it is up 2.5 percent. But that masks the fact that it was only up 1 percent in the first few months of the year, and it's been running four. In fact, June and July, the 2 months that you were talking about the increased imports from, the consumption was up 5.7 percent. It is up 3.5 percent this month.

It is clearly on a very sharply increasing trend. But let's say 2 to 3 percent.

Senator NICKLES. How much is that per day? Is that 16 million barrels?

Mr. DIBONA. Well, 5.7 percent is roughly 1 million barrels a day. But for the year as a whole, it is up around half that, about a half million barrels a day.

Senator NICKLES. How much per day? How much are we consuming per day?

Mr. DIBONA. We are consuming a little over 16 million barrels a day, between 16 and 17 million barrels a day right now. But that is, right at the moment, 500,000 or 600,000 a day more than a year ago. By the end of the year it may be higher than that.

So, if that kind of increase continues, you'll get another 2 or 3 million barrels a day in consumption that you have to make up.

The sum of those would eat up, for the United States alone, all of the OPEC surplus in 5 years, and we only represent a third of the world's consumption.

So, oil is priced in dollars. The dollar has been falling in value. The price has been dropping more sharply in foreign countries than it is in the United States. So the sum evidence of that is these demand increases have been more sharp in the other OECD countries than they have been in the United States.

We do not know what is going to happen. There is uncertainty in these figures. But we are not talking about a 10-year time period before we are in trouble.

Some people think it may be five. I think it is going to be shorter.

Should I go on with my statement?

Senator NICKLES. Yes, and excuse me for interrupting.

Mr. DIBONA. That's OK. I just have a couple of more points to make.

Unfortunately, some policies currently being considered by the Congress could increase rather than reduce the Nation's vulnerability to future energy shocks.

The tax reform bill that has emerged from the House-Senate conference places an additional 5-year tax burden of at least $10 billion on the domestic petroleum industry. It is a disproportionate burden compared with the industry's share of business income in the economy. That is, we represent something like 4 to 5 percent of the gross domestic product. We are going to pick up at least 8 percent of the total tax burden, and here is an industry which already pays a very high rate of taxation, above the average, and is in trouble.

Furthermore, it is an industry which we ought to be encouraging rather than discouraging, and this tax bill discourages it.

Now, I say this knowing that you, Senator Nickles, had much to do with constraining that increase. Some people think we did very well in the petroleum industry because we did so much better than what might have happened and what the House had proposed and what the first administration proposal was.

So, you helped to reduce that very substantially by a lot of the work you did on that.

Nevertheless, we ended up in a situation which will discourage oil production, at a time when we ought to be doing exactly the opposite.

The House, second, has moved to reimpose moratoria on Federal leasing of offshore areas with some of the best prospects for major new discoveries. At a time when the exploration budgets are being pared to the bone, it is particularly important that the remaining funds be invested in the most promising areas, and only in areas in which there is likely to be some promise are you going to be able to generate the funds, find the funds, or borrow the funds to do this.

So, it is extremely shortsighted to say that now that we are in a period of glut, we ought not to be leasing these lands. It is right now when we ought to be doing it because we are going to be in a jam in a relatively few years. We are going to be in a jam before that oil is available.

The House has adopted and a House-Senate conference committee is considering proposals that would pay for accelerated cleanup of abandoned toxic waste sites by increasing taxes on the domestic petroleum industry in a disproportionate and discriminatory way, far in excess of any contribution to those sites ever made by the petroleum or chemical industries.

It is another peculiar perverseness of the current situation.

The foreseeable energy and security needs of the Nation require more development of domestic energy resources. Some policies that would contribute to this end, though not fully achieve it, include natural gas decontrol, price decontrol, increased access to public lands for drilling, elimination of the windfall profits tax and further expansion of the strategic petroleum reserve.

We think those would not solve the problem. But they would help. They would be in the right direction.

Thank you very much.

[The prepared statement of Mr. DiBona follows:]

TESTIMONY

SUBMITTED BY

CHARLES J. DIBONA

President, American Petroleum Institute

Before the

Committee on Energy and Natural Resources
United States Senate

September 18, 1986

Summary

- o The domestic petroleum industry continues to experience very severe recession. The downtrend in oil company capital spending for domestic exploration-production, which began a few years ago, has accelerated in 1986. Domestic drilling activity has fallen sharply. Unemployment in oil and gas extraction has risen greatly.

- o Many producing wells have been shut in. Consequently, domestic oil production is declining. Natural gas production capability also has fallen substantially.

- o There is much uncertainty about the near-term course of oil prices. Although the price of oil has risen since early August when OPEC agreed to limit its production, the price still is only about one-half of its level a year ago. For the future, much depends upon the behavior of the major foreign producers. However, projections from several sources indicate that, if relatively low prices persist, U.S. oil consumption, which has risen markedly of late, will continue to rise and production will continue to fall. U.S. oil imports, which recently reached about 7 million barrels per day or over 40 percent of consumption, will increase further. The same trends are underway in many other consuming countries.

- o Therefore, low oil prices probably will not last over the longer term. This conclusion does not depend upon further cuts in OPEC production. If low oil prices persist, the demand for OPEC oil will rise quickly. The growth in demand for OPEC oil probably will absorb most or all of OPEC's excess capacity (currently about 10 million barrels per day) in just a few years. Oil prices then might well rise precipitously.

- o U.S. public policies should be based upon the realization that foreign oil probably will not be available at low prices over the long term. Unfortunately, in some respects Congress recently has been moving in the wrong direction. The tax reform bill that emerged from the House-Senate conference places substantial additional burdens on the domestic petroleum industry -- at least $10 billion in additional taxes over the next five years. This is at least 8-9 percent of the $120 billion that the Joint Tax Committee estimates will be the total 5-year business tax increase under the bill. Inasmuch as the petroleum industry accounts for only 4-5 percent of the private (non-government) gross domestic product, the tax reform bill would place a disproportionately large burden on the industry. This tax hike will seriously reduce the industry's ability to find and develop new sources of domestic energy. Recent Congressional moves to restrict federal leasing of offshore areas for energy development and to increase oil industry taxes to pay for the cleanup of abandoned toxic waste sites also would be counterproductive.

- Domestic energy resources have to be found and developed in preparation for the time when world oil markets are much tighter than they are now. Natural gas price decontrol, improved access to public lands for drilling, the elimination of the crude oil windfall profit tax, repeal of the Fuel Use Act, avoidance of health and environmental regulations whose costs outweigh benefits, and the buildup of the nation's Strategic Petroleum Reserve all would help, but at present oil price levels they would not solve the nation's energy security problems.

Introduction

My name is Charles J. DiBona. I am President of the American Petroleum Institute. My testimony today is joined by the Rocky Mountain Oil and Gas Association.

When I testified before this Committee last March, the price of oil had fallen from almost $30 per barrel to under $15 per barrel in just a few months. The Committee was concerned about what this development would mean for the domestic energy industry and for the nation's energy security. In my March testimony, I emphasized the following basic points: 1) low oil prices, if sustained, would substantially reduce domestic energy production and stimulate domestic energy consumption; 2) energy production would be discouraged and consumption stimulated in other non-OPEC countries as well; 3) the resultant increase in demand for OPEC oil would put pressure on OPEC productive capacity within a very few years and once again enable OPEC to dictate higher oil prices; and 4) the U.S., therefore, cannot afford to become complacent but instead should now establish policies to make the nation less vulnerable to unfavorable developments in international oil markets.

Since March the price of oil has fluctuated rather widely, and there now is great uncertainty about its near-term course. Much depends upon the actions of various foreign producers, including both OPEC members and non-members. In any event, developments over the past six months support the view that I previously expressed to this Committee: the U.S. cannot prudently rely upon foreign oil being readily available at low prices over the long term. The following discussion details these recent developments. It then examines some of the effects of the petroleum industry's retrenchment on activities outside the oil patch, presents some recent evidence on the potential long-term effects of sustained low oil prices, and comments upon current public policy issues.

Recent Developments in Energy Markets

Since the price of oil began sliding in 1981, oil companies have cut their capital spending for domestic exploration and production substantially. Between 1981 and 1985 the major oil companies reduced such spending by more than one-quarter. The number of drilling rigs active domestically fell by about one-half during this period. Consequently, reserve additions were not sufficient to maintain the reserve base.

The sharp fall in oil prices that began late last year accelerated the downward trend in exploration-production spending. During the first half of this year, the leading oil companies' expenditures for domestic exploration-production were about 32 percent below their expenditures during the first half of 1985. Such spending during this year's second quarter was about 44 percent below the year-earlier level. This suggests that as companies had more time to react to the fall in oil prices, they made larger cuts in domestic exploration-production capital spending. It also indicates that the actual cut in such spending this year will be greater than what was generally projected early in the year. For example, in its February 1986 survey the Oil and Gas Journal projected a 25 percent drop in 1986 domestic exploration-production spending. That projection now appears overly optimistic.

The fall in oil prices this year also has had substantial adverse effects on oil company revenues and profits. The revenues of nineteen leading petroleum companies fell by 20 percent and operating profits fell by 18 percent between the first half ot 1985 and the first half of 1986. The declines in the second quarter were much more severe than in the first quarter; revenues fell by 27 percent and operating profits fell by 34 percent from year-earlier levels. Large oil companies remained far less profitable than large non-oil companies. During the first half of 1986, the return on stockholders' equity was 9.7 percent for the leading oil companies as compared with 14.4 percent for a group of ninety of the largest non-oil industrial companies.

It should be noted that the leading oil companies included in the calculations above generally are integrated concerns with refining, transportation and marketing (downstream) operations as well as oil and natural gas production. This year the downstream sectors of the industry have fared better than the production sector. Thus, the profits decline in the production sector has been even greater than the figures cited above, and many non-integrated producers have done much worse than those figures would suggest.

Financial retrenchments have led to sharply reduced activity in the oil patch. The number of active drilling rigs in the U.S. plummeted from almost 2,000 at the end of last year to about 700 recently. Although the rig count has risen modestly in recent weeks, it still is very close to the lowest count (663 in mid-July) since records were begun in 1940. It now is about 85 percent below the high of about 4,500 reached in 1981.

Other indications of reduced activity also are evident. For example, the number of active seismic crews stood at only 158 in July compared with 397 in July 1985. And, well permit applications, which indicate intentions to drill, were down 39 percent in the first half of 1986 relative to the first half of 1985.

The drop in drilling activity has resulted in a sharp fall in oil and natural gas well completions. Based on reports received by the American Petroleum Institute, total well completions in the first half of 1986 are estimated to have fallen 25 percent from the first half of 1985. On a quarterly basis, completions declined 13 percent in the first quarter and 38 percent in the second quarter, as compared with year-earlier levels. Oil well completions declined only 7 percent in the first quarter but by a whopping 46 percent in the second quarter as the oil price drop took effect more fully. Natural gas well completions showed a more even fall, declining 19 percent in the first quarter and 28 percent in the second quarter.

Not only are fewer new wells being drilled, but many producing wells are being shut in. Shut-ins occur basically because the value of the oil produced is not sufficient to cover the costs of maintaining production. Stripper wells (wells producing less than 10 barrels of oil per day) are particularly vulnerable. A survey taken by the National Stripper Well Association earlier this year indicated that about 100,000 of the Nation's 460,000 stripper wells would be shut in at wellhead prices of $15 per barrel or less. Indeed, the closing of many of these wells already has occurred. Since stripper wells, on average, produce about 3 barrels per day, the closing of 100,000 such wells would reduce domestic oil production by about 300,000 barrels per day. It probably will be uneconomic ever to re-open many of these shut-in stripper wells.

The result of less drilling, reduced upkeep of existing wells, and well shut-ins has been a significant drop in domestic oil production. Crude oil production has fallen by about 300,000 barrels per day since last December. Moreover, the downtrend is accelerating. The production drop in August was much larger than in preceding months.

Reduced drilling for natural gas, the price of which also has fallen sharply this year, and lower per-well production capability have resulted in a substantial decrease in domestic gas production capability as well. According to a recent American Gas Association (AGA) analysis, non-associated natural gas annual production capability will decrease about 663 billion cubic feet this year, following a 553 billion cubic feet drop in 1985. (Total domestic natural gas production currently is about 16 trillion cubic feet per year.)

Finally, the decline in oil- and natural gas-field activity is having a severe negative impact on employment in the petroleum and petroleum-service industries. According to data compiled by the U.S. Bureau of Labor Statistics, employment in oil and natural gas extraction, including the oil and gas service industry, fell from 570,000 in December 1985 to 444,000 in July 1986 (the latest data available), a decline of about 126,000 or 22 percent. The current level is 264,000 below the peak year employment of 708,000 in 1982, a drop of 37 percent.

The Petroleum Industry Cutback's Effects Outside the Industry

The table below, which is based upon U.S. Department of Commerce data on the input-output relationships in the U.S. economy, shows the estimated number of workers displaced in several industries when exploration-production employment is reduced by one thousand.

As the table indicates, over 800 jobs are estimated to be lost in supplier industries for every 1,000 jobs lost directly in exploration-production. Thus, employment in a wide range of industries is being hurt by the cutbacks in the oil patch.

Probably the companies that are most hurt by curtailments in exploration and production are the manufacturers of oil-field equipment and companies providing services to oil and gas producers such as drilling contractors and geological/geophysical

Workers Displaced Per One Thousand Reduction in Petroleum Exploration-Production Employment

Machinery and Equipment	112
Primary Iron and Steel	112
Transportation and Warehousing	88
Insurance	58
Computer and Data Processing Services	51
Engineering, Architectural and Surveying Services	32
Fabricated Structural Metal Products	31
Nonstructural Fabricated Metal Products	29
Eating and Drinking Places	29
Finance	20
Total Workers in all Non-oil Industries	817

contractors. The investment firm of Salomon Brothers regularly monitors 12 leading firms in these areas. From 1980 through 1982, these companies recorded aggregate earnings averaging almost $3.0 billion each year. Salomon Brothers projects aggregate losses of over $600 million for them in 1986, and further losses in 1987. Some of the hardest-hit companies have suffered declines in stock market valuation of over 95 percent. Moreover, this has occurred during a period when overall stock market measures have risen. Thus, the owners (stockholders) as well as the employees in the oil services industry have been harmed by the cuts in exploration-production, and the very viability of some important oil-service firms has been threatened.

A cutback in oil and gas activity not only affects many industries, but also many different states where these industries are located. A 1985 study for API by Battelle Pacific Northwest Laboratories showed that the employment effects of offshore exploration and production are spread across all 50 states.

While the response to lower oil prices is a general cutback affecting both offshore and onshore activity, the information from the Battelle Study is suggestive of how the employment effects of a cutback are spread across the country. The Battelle Study found that the following states were the most affected by a change in offshore activity: Alabama, Alaska, California, Florida, Illinois, Indiana, Louisiana, Massachusetts, Michigan, Mississippi, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, and Virginia. While some of these states -- Texas, Louisiana and Alaska -- are readily identified as oil and gas producing areas, many other states are affected as well. For example, inland states with little direct oil and gas activity such as Ohio, Illinois and Indiana have significant effects from oil and gas activity because their industries supply materials for oil and gas operations.

Data on regional business failures and bankruptcies provide an additional indication of the difficulties that are currently faced by the many small companies and individuals who have businesses related to the oil and gas industry. According to Dun & Bradstreet, in the first quarter of 1986, business failures in the West South Central Region -- which includes Oklahoma, Louisiana, Texas and Arkansas -- were up 53.8 percent over the first quarter of last year -- from 1,702 to 2,618. This compares to a 12.4 percent increase in failures for the nation as a whole. The other regions hard hit are the farm states and the mountain states (also energy-related). The rate of failures for the U.S. would be flat or slightly down if it were not for the economic hardship in these three regions.

To sum up, the fall in oil prices this year has had a substantial negative impact on oil- and natural gas-seeking activities. Economic damage has been done far beyond the major oil companies and outside the major oil producing regions of the country.

The Petroleum Outlook Over the Longer Term

Although oil continues to be available on world markets at relatively low prices, there are strong reasons to believe that this situation will not last over the longer term. This conclusion does not depend upon further cuts in OPEC production. Declines in U.S. and other non-OPEC oil production probably will combine with greater petroleum demand to tighten the world oil market considerably.

The American Petroleum Institute's recent survey of oil companies found that, at a sustained real price of $15 per barrel (in 1985 dollars), domestic crude oil production would fall from 8.9 MMB/D in 1985 to 6.2 MMB/D in 1991 and natural gas production from 17.2 TCF in 1985 to 13.3 TCF in 1991. Other organizations, using different methodologies and assumptions, arrive at similar conclusions. For example, the Energy Information Administration (EIA) has estimated that at real prices (in 1985 dollars) of $17 per barrel in 1990 and $20 per barrel in 1995 -- somewhat higher prices than those relating to the API production estimates cited above -- domestic oil production would fall to 7.2 MMB/D in 1990 and to 5.0 MMB/D in 1995.*

Moreover, U.S. oil consumption would be stimulated by such relatively low oil prices. API has conducted analyses of future U.S. oil consumption based on alternative economic growth rates and oil prices. Assuming that the real GNP (inflation-adjusted gross national product) will grow at its long-term trend rate of about 3 percent per year and assuming that real oil prices will rise from about $13-$15 per barrel in 1986-1988 to about $20 per barrel in 1995, U.S. oil consumption (including natural gas liquids) is estimated to grow to about 23 MMB/D in 1995, or by about 4 percent per year on average.

Although this oil consumption projection is quite different from the experience of recent years, it is consistent with the pattern of earlier decades when oil consumption grew rapidly. It also projects that people will continue to respond to substantial changes in oil prices. Thus, just as there was a strong negative demand response to prolonged relatively high oil prices, oil demand is expected to respond positively to prolonged much lower prices. Indeed, there are signs that this already is occurring. U.S. oil product consumption is rising at an accelerating rate. Consumption in the first seven months of 1986 exceeded consumption in the comparable period of 1985 by only 2.5 percent, but consumption in the second quarter of 1986 was 2.7 percent greater than in the comparable year-earlier period, while first quarter consumption was up 1.2 percent. Consumption in July 1986 was 5.7 percent greater than in July 1985.

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*U.S. Department of Energy, Energy Information Administration, "The Impact of Lower World Oil Prices and Alternative Energy Tax Proposals on the U.S. Economy," April 18, 1986.

It should be emphasized that the oil consumption estimate cited above is not a forecast of what will happen. Rather, it is a projection, as are the supply projections, of what could happen if much lower oil prices than in earlier years persist over a long period.

Together, the supply and demand projections suggest that, if low oil prices last, U.S. oil imports would grow substantially -- from about 5 MMB/D in 1985 to at least 15 MMB/D in 1995. Already, imports reached over 7 MMB/D in late August-early September, or more than 40 percent of domestic consumption. OPEC currently plans to produce 16-17 MMB/D in September and October, and it has an estimated total productive capacity in the 26-30 MMB/D range. Thus, a 10 MMB/D increase in U.S. demand for imported oil, in itself, would absorb most or all of OPEC's total current excess productive capacity.

Moreover, the same reactions to low oil prices -- increased consumption and reduced production -- are likely to occur in other non-OPEC countries. Figures recently released by the International Energy Agency support this view. For example, these data indicate that European oil consumption in the second quarter was about 9 percent higher than it was in the second quarter of 1985, while total non-OPEC oil production was about 500,000 B/D lower than in the second quarter of 1985.

There is only a limited amount of excess producing capacity worldwide. The likely net result is that long before this capacity would be fully utilized there will again be upward pressure on world oil prices. Previous experience indicates that when even 80 percent of OPEC capacity is utilized -- or only about 21-24 MMB/D -- prices probably will rise. Demand for OPEC oil need rise by only about 4-7 MMB/D for this point to be reached. The OPEC countries, which together hold about three-quarters of the non-Communist world's oil reserves (and about two-thirds of total world reserves), would then once again be in the driver's seat. The increased demand for OPEC oil will increase member countries' revenues and will tend to firm world oil prices. Thus, cartel members will be under less pressure to produce more oil, and indeed they will find it possible to reduce production while sustaining acceptable levels of income.

No one can be very precise about the timing of this process. The reaction of consumption to low oil prices might be more delayed or less pronounced than past experience suggests, or there may be important new oil discoveries. However, it appears quite likely that, if oil prices remain at or near current levels, most of OPEC's excess capacity will be absorbed within a very few years. The price of oil then probably would rise, and it could rise sharply. Thus, the U.S. not only cannot be assured that oil prices will stay down over the long term, but there are strong reasons to believe the opposite would occur.

Implications for Current Public Policy Issues

Policies to encourage domestic energy exploration and development today directly affect not only current circumstances but energy security over the longer term. Just as the domestic petroleum that America produces today is available because of investment decisions made in the past, the investment decisions that federal policy can affect today will provide the petroleum that offsets imports during the 1990s and beyond. If world petroleum markets are likely to tighten as implied by the assessments above, now is the time to choose appropriate long-run policies.

Unfortunately, Congress has taken some large steps in the wrong direction recently. Most importantly, the tax reform bill which has emerged from the House-Senate conference would penalize the domestic petroleum industry at a time when the industry is suffering from unprecedented economic problems as detailed above. This bill would cost the petroleum industry at least $10 billion over the next five years -- about 40 percent from energy-specific tax changes and 60 percent from more general provisions. The petroleum industry accounts for only 4-5 percent of the nation's private (non-government) gross domestic product. Yet, the tax reform bill would require it to pay about 8-9 percent of the total 5-year business tax increase of $120 billion estimated by the Joint Tax Committee. The petroleum industry would be hard-hit not only because some of the proposed tax hikes are directed specifically at it, such as the limitation on expensing of intangible drilling costs, but also because the oil companies are capital-intensive and operate internationally. Thus, they would be particularly harmed by the proposed stretching-out of depreciation costs, the elimination of the investment tax credit, and the restrictions on credits for foreign taxes paid.

Moreover, the petroleum industry's federal tax rate consistently has been higher than the average for other industries. Effective federal tax rates on U.S. income, including current income taxes and windfall profit taxes (WPT), of leading U.S. oil companies were higher than the tax rates of leading non-oil industrial companies in each of the six years 1980 through 1985. In 1985, the federal tax rate of 20 leading oil companies was 36 percent, while that of 100 leading non-oil companies was 24 percent.

A second area in which we believe some members of Congress erred recently regards federal leasing of offshore lands for energy development. For many years it has been important that the federal government have an effective offshore leasing policy inasmuch as the Outer Continental Shelf (OCS) can provide considerable supplies of energy. Federal OCS production currently accounts for about 11 percent of the total oil and 25 percent of the total natural gas produced domestically.

Because of the negative impact that the recent oil price drop is having on domestic petroleum development, it has become increasingly important that the federal government not unnecessarily restrict access to the OCS for energy development. The oil price fall has reduced oil companies' cash flows as well as the economic viability of prospective drilling projects.

Therefore, if the federal government is to mitigate the decline in domestic petroleum production and the growth in oil imports, it should make the most promising OCS areas available for energy development. Even as the economic conditions facing the petroleum industry have worsened in recent years, the industry has continued to bid on the more promising tracts offered for lease and has continued to drill in these areas. Congressional efforts to delay California OCS development for several years would deny the nation the benefits of potential new discoveries of oil and natural gas for many years to come.

In summary, in view of the limitations that the recent sharp fall in oil prices has placed on the funds available to the domestic oil industry and on the viability of energy investment prospects, it is imperative that public policies eliminate unnecessary restraints on domestic energy production. National energy policy should, as a start, remove impediments such as natural gas price regulation and unnecessary restrictions on access to public lands that hold promise for energy development, build up the nation's Strategic Petroleum Reserve to prepare for emergencies, and remove restrictions on industrial and utility use of oil and natural gas. Moreover, the removal of tax restraints such as the windfall profit tax, which in fact is a discriminatory excise tax that discourages domestic crude oil production, would be helpful, particularly if oil prices start to rise. It would be counterproductive to impose discriminatory new taxes on the domestic petroleum industry -- as the tax reform bill and some proposals to fund the cleanup of abandoned toxic waste sites would do.

Finally, it is important that government regulators do not impose unnecessarily large health and environmental protection costs on the domestic petroleum industry. Regulatory actions under consideration regarding such matters as gasoline vapor control, underground gasoline storage tanks, air quality standards for ozone, treatment of refinery wastes, and disposal of water pumped from oil wells could impose very large costs on the industry. Protecting health and environment is important, and we fully support reasonable regulations to do so. However, we urge that regulations be based upon a careful weighing of benefits and costs, so that resources are not wasted.

By adopting all of these actions, the nation can make itself less vulnerable to adverse events in international oil markets like those that occurred in the 1970s. At present oil price levels, however, these actions by themselves will not totally solve our longer range problem of obtaining an adequate reasonably priced energy supply.

Senator NICKLES. Thank you, Mr. DiBona.

The CHAIRMAN. Thank you.

Dr. ECK.

STATEMENT OF DR. THEODORE R. ECK, CHIEF ECONOMIST, AMOCO CORP.

Dr. ECK. Thank you.

My name is Ted Eck. I am chief economist for Amoco. I suppose I am appearing here as a forecaster of the petroleum market.

I would like to state that the only thing I am sure about is that the outlook is going to be uncertain.

I just attended a conference at Aspen, where we had a number of world-class petroleum experts, including Richard Grundy and myself. I think we concluded that there is one thing that we are sure about, and that is that prices are going to be impossible to forecast and that they are going to be highly variable.

If we look at the last 10 days, we see that prices have varied 15 percent. If we look at the last 6 weeks, they have varied 60 percent.

In a situation like this, it is, needless to say, difficult to plan. If we look at a planning horizon of 1990, I think the range of forecasts is between $10 and $30.

Now, you may ask how can you plan expenditures for exploration and production in a forecasting range of this magnitude?

As Lloyd Unsell has said, even if he could plan and get up the courage to invest, there is nobody who would lend the money.

Indeed, this industry continues to be in a mold of very serious disinvestment, with large amounts of money leaving the petroleum industry.

It has been estimated that the petroleum industry is going to reduce capital spending this year 40 percent. It is true that oil prices have come up from $10 to $15 now back to $14. Well, $14 is better than $10, but it is not good. Indeed, it is not good enough for the industry to increase its spending.

I am convinced that the industry will not increase spending for exploration and production for next year above the levels for this year at present and prospective prices.

Now, what has the impact of this been?

It has been estimated that we have already lost something like 300,000 jobs in the petroleum and petroleum service industry and a lot of additional jobs that are related to that impact.

It is clear to me, as an economist, that the recession that has been experienced in the Rocky Mountains and in the Southwest has not been offset by an improved situation in the rest of the Nation. The net effect of the recession in the oil industry has been to drag the entire economy down.

I think most economists would agree with me on that point, that the economy has not benefited, certainly not to date, from the recession in the oil industry.

I am concerned that low oil prices are not only going to limit spending on exploration and production, as has been testified to this morning, but I think there is going to be a basic change in the character of this investment. We are going to increasingly have to look for very, very big reservoirs because only the very largest reservoirs will be economic at $15, $16, or $17 a barrel. Essentially, all onshore exploration will be marginal or very little onshore exploration will take place.

Alaska is essentially out of the picture. Alaska is just not economic. New operations in Alaska are just not economic at prices below $20. The same comment, incidentally, applies to northern Canada.

As indicated, the tax bill is not only going to reduce total spending, but I think it is going to change the basic character of our spending again. The net effect of the tax bill is to substantially increase the cost of marginal wells.

A marginal well is the kind we typically drill in the United States, which finds a little oil, a little gas, but very little. And the cost of these economically unsuccessful wells will go up substantially as a consequence of the tax bill.

On the other hand, with the lower tax rates, the bonanzas look better under the tax bill. Unfortunately, we do not drill very many bonanzas in this country. Those are the ones we drill overseas.

So, what I am really concerned about in this tax bill is not only does the total spending level come down, but there will be a shift in the relative emphasis of this spending, favoring overseas operations.

Now, at the same time we are increasing taxes in this country on the U.S. industry, it is interesting to know that many countries overseas are busily cutting taxes on the petroleum industry and making concession terms far more attractive.

I just looked over the list yesterday, and the list includes Norway, Australia, Canada, India, China, Malaysia, Indonesia, Sri Lanka, Jordan, Ethiopia, Thailand, Tunisia, Morocco, Algeria, and Argentina. This is the list we have to date, and we know other countries are moving to make petroleum exploration in those areas overseas more attractive.

Now, if it were not bad enough what is happening to the oil industry, I would like to say that I am even more concerned about the impact of $16, $17, and $18 oil on the gas industry, because the equivalent wellhead gas price of $16, or $17 is less than $2 per thousand cubic feet. At less than $2 per thousand cubic feet, essentially no onshore new U.S. gas exploration is attractive. The only wells that can be attractive at all to us are giant offshore discoveries.

In the case of gas, I think we have bigger troubles than we do in oil because in oil, we can import from overseas. We have talked about that.

In the case of gas, the only people we can really import from economically are Canada and Mexico.

If we look at what is happening in Canada, Canada has suffered a sharper contracting in drilling than we have in the United States, and very, very little drilling is taking place in Canada.

I conclude from this that we just logically cannot rely for the longer term on Canada and Mexico as sources of imported gas.

Now, I further conclude that the most likely event is that sometime before 1990, present industrial and utility users of gas are simply going to have to look for some other fuel. I think that fuel is going to be imported oil.

We have heard a lot of discussion about the Saudis opting for $16 or $17 for oil. I would conclude that that is about the worst case, the worst price level they could possibly come up with as far as the United States is concerned. That is just high enough to keep us alive, and it is certainly high enough to keep the Arab nations—and there are many Arab nations—in relatively good shape. Not only is it a disaster for the United States, but it is a disaster for most other non-Arab countries, or non-Persian Gulf Arab countries. Mexico, Egypt, Iran, the Soviet Union—it would be an absolute financial disaster at that price.

I would submit that this is a price level that is not going to be politically stable because it is so bad for these countries—countries like Egypt, countries like Iran, and countries like the Soviet Union, which will suffer very severe foreign currency strains at this price level—that they may indeed be encouraged to take more aggressive political actions in the Middle East to do something about it.

I indicated that this price is a disaster for the drilling industry. I indicated that in the United States, there are very few wells that are attractive at prices below $20. That is also true in the North Sea, for most new North Sea operations. You just can't make them go at prices below $20. That is true of most of Africa, most of Latin America and most of Asia.

There just are not many places in the world where you can drill wells and make a reasonable rate of return at prices below $20.

This says that, inevitably, the world is going to become more dependent on OPEC.

I was amazed to hear the administration witness say that there may be no concern about increases in imports above 50 percent, and I was further amazed to hear that he rather thought well, we would not have to import from the Middle East.

I don't know where he thinks the oil is.

We are in the same place we were 10 years ago, where two-thirds of the world's reserves are in the Middle East. So, if we are going to boost our imports sharply, 50 percent or 60 percent, there is no question that that is where the oil is going to come from.

I, for one, at least, am concerned about that.

Well, what can the Government do about the situation?

As indicated, certainly we hope things will not get worse. The tax bill is worse. Somebody suggested the only hope of the tax bill is to have a secret vote.

I don't know if that is the answer or not.

The Superfund is something that we are worried about. The House bill is an absolute disaster to this industry. The Senate bill is an acceptable approach. But the industry, given its present and prospective financial condition, simply cannot pay the costs that are indicated in the House approach to the Superfund.

I think the most important action the Congress could take would be on the windfall profit tax. For those who are brave enough to forecast price increases going into the $20 or $25 range, if you work out the economics, you see Government getting most of the benefit.

I do not think there is any economic justification whatsoever to retain the windfall profit tax. There might be some political reason; but, surely, I don't think any economist would get up and say the windfall profit tax in its present form makes any sense whatsoever to the United States.

I thoroughly agree that we need to do something about acreage, that we have to move forward aggressively with acreage leasing and quite fooling around with the business of canceling sales and withdrawing acreage, and so on.

The facts are that, with limited drilling budgets, we are going to look only for elephants, and we need an awful lot of acreage to find those elephants—just a lot more acreage. Unfortunately, most of those elephants are only going to be in the offshore areas.

In fact, it seems to me that the logical program for the United States on acreage is to just put as much acreage out there as possible. If we find an elephant, we are going to produce it. I think that is true.

If we find a smaller province, we are probably not going to be able to develop it. We will not be able to develop it at $15 or $16, but it would be in the interest of the United States to know where our prospective additional reserves are. If we have those identified and if prices go up, then we can quickly get this country going and get drilling to pick up. If we don't do the exploration work, we are just going to lose some valuable time.

We also need to look at minimum bids, and we also need to consider increasing the number of years that the industry would have to develop acreage that is made available.

You have heard discussion of SPR. I am a backer of SPR like everybody else. But the problem I have with SPR is sometimes the backers are too enthusiastic, too zealous, and promise too much because the only thing a strategic petroleum reserve can really do for us is take care of a wartime shortage. But it is not going to help this creeping dependency, this creeping increase in reliance on politically unstable and probably sharply increasing in cost oil imports over the longer term.

As I said, there is no agreement on where oil prices are going near-term; but I think everybody agrees that 20 years from now, the price of oil is going to be a whole lot higher and, unless we do something about it, that it is all going to be coming from the Middle East.

Discussion also has centered on import fees. The problem we have with import fees, the most serious problem, I suppose, is we have never seen a proposal that was not ridden with all kinds of exceptions. I am sort of the opinion that it is probably not possible to come up with an import fee program that does not have exceptions. Exceptions are what killed it in the past and are what would kill it in the future.

At this Aspen meeting I attended, there were a lot of economists present. I think the general opinion of economists is that import fees are a very costly way of increasing supply security. Everybody agrees, I think everybody in this industry agrees that drilling is just too low and that we need to do something about drilling, but that import fees may be a really costly way to do it. The least cost methods may well include the windfall profit tax, which I made reference to. An aggressive leasing program I think would make a big contribution. We need to exhaust these methods before considering much, much more costly alternatives. I think that would be the conclusion of most energy economists.

That completes my formal statement.

Thank you.

[The prepared statement of Dr. Eck follows:]

Statement of

Dr. Theodore R. Eck
Chief Economist, Amoco Corporation

on:

U.S. OIL AND GAS CURRENT SITUATION AND OUTLOOK

to the:

Committee on Energy and Natural Resources

of the

United States Senate

September 18, 1986

Fall of Oil Prices

The major problems presently confronting the U.S. petroleum industry are primarily the consequences of the drastic fall of crude oil prices in the first half of 1986. Companies in the U.S. petroleum industry are presently under severe financial strain. While attention has focused on the dramatic plunge in crude oil prices in 1986, prices had fallen steadily since 1981.

The composite refiner acquisition cost of crude oil dropped by 24 percent, from $35 per barrel in 1981 to $27 per barrel in 1985. Adjusted to exclude inflation (as measured by the U.S. Gross National Product implicit deflator), crude oil prices fell by 36 percent from 1981 to 1985. This price decline presented financial problems to the petroleum industry, but the necessary adjustments were gradually made by the companies. The latest available U.S. refiner acquisition cost (June 1986) was $13 per barrel, down 52 percent from the 1985 average cost. This represented a total decrease of 64 percent from the 1981 average in nominal terms and 70 percent in inflation-adjusted dollars.

In the first half of 1986, spot crude oil prices fell precipitously, by about 60 percent. The benchmark West Texas Intermediate spot prices fell to as low as $11 per barrel in the month of April, from $28 per barrel at the start of 1986. While prices rallied in May to highs of $16-17, prices dropped again in late June and July to the April level of $11. Prices have since increased by $5-6 per barrel from these extreme lows to $15-16, but are only slightly more than half of 1985 levels. It is very uncertain as to what future crude prices will be, but prices will probably fluctuate appreciably at levels well below the $25-30 levels for the next year or more.

The extremely low oil prices and the uncertainty of future prices have had rapid and severe financial consequences for oil and gas companies and the oil service industry. Numerous smaller companies, particularly drilling firms, have gone bankrupt, and many others are presently in severe financial circumstances. Almost all firms in the industry have been forced to cut back employment and drastically reduce capital expenditures. A continuation of recent price levels will undoubtedly require substantial further reductions in employment and capital expenditures, and additional firms in the oil industry will fail. The search for new reserves to replace the oil and gas we are currently consuming is being sharply curtailed.

Effect of Lower Oil Prices on the U.S. Economy

The general consensus is that the impact of the substantial reduction in oil prices will have a positive impact on the U.S. economy and increase the rate of growth. We have not been impressed with results to date. Indeed, the energy-led recession in the Rocky Mountain and Southwestern states seems to have fully offset any benefits that may have accrued to the rest of the nation. Moreover, recent oil import volumes have increased and promise to continue to rise. The combination of high import dependency and sharply lower domestic investment for oil and gas exploration and production can scarcely be expected to boost U.S. economic performance.

The consequences of falling oil and gas prices have been significantly negative in the major oil producing areas of the U.S., because of the relative immediacy of decreases in employment and capital spending. In addition, the fall in oil prices has placed severe strains on banks with significant energy loans. There also is as yet little to indicate that other industrial countries such as Japan, West Germany, France, etc., which import higher percentages of crude oil than the U.S. have benefitted from crude oil price decreases despite the accompanying depreciation of the U.S. dollar cost of oil expressed in local currency terms.

Present Status of the Petroleum Industry

As indicated above, the financial status of oil and gas and oil service companies has deteriorated very significantly since the plunge of oil prices in the first half of 1986.

The following tabulation by Salomon Bros. Inc. (investment firm) shows a July 1986 tabulation of the planned cuts from 1985 to 1986 in U.S. exploration and production expenditures by petroleum firms. The reduction of $11 billion or 40 percent of the 1985 total illustrates the capital expenditures cutbacks by the petroleum industry to date. The U.S. petroleum industry is a large component in total U.S. capital expenditures.

Exploration and Production Capital Expenditures

	Billions		
	1985	1986	% Reduction
Major Petroleum Cos.	25.0	15.3	-39
Selected Independent Cos.	2.5	1.2	-50
Total	27.5	16.5	-40

A study done at Oklahoma State University estimates that in excess of 300,000 people directly employed within the petroleum service and supply industry will lose their jobs as a result of the price decline and that the indirect impact will mean an additional 500,000 jobs will be lost. These negative impacts of lower oil prices tend to offset the benefits to the domestic economy that result from cheap energy prices.

A continuance of oil prices at current levels will inevitably lead to further reductions in employment, capital spending, and rising bankruptcies.

The current rate of earnings (in many cases, losses) of petroleum firms precludes the revival of capital spending necessary to sustain present levels of U.S. oil and gas oil production. Oil consumption is increasing while oil production is declining; consequently, oil imports are rising. As of the end of August, oil imports for 1986 were 21 percent above the comparable period of 1985. The rising tide of imports will continue as production declines. At present levels of capital spending for exploration and production, the declining trend of U.S. oil production will not only continue but will accelerate.

U.S. Oil and Gas Production in the Future

Domestic additions to proven reserves of oil and natural gas have been unable to keep pace with U.S. production of crude oil and gas. As a consequence, total U.S. proven reserves of oil and gas have fallen slowly but persistently since 1970, and the reserve/production ratios have been steadily falling. The rig count, after rising substantially from 1,700 in 1975 to 4,000 in 1981, fell rapidly to 2,000 in 1985. Capital expenditures for exploration and production soared from 1973 to an extremely high peak in 1981, reflecting the significant 1973/74 and 1979/80 increases in crude oil prices, but fell by almost half from the 1981 to 1985 level, as the prices declined by about a quarter. Low oil prices for an appreciable period of time will not only limit capital spending to discover oil and gas, but may tend to focus efforts on elephant-size discoveries and probably shift more spending to foreign countries. U.S. onshore efforts as well as Alaskan operations are almost certain to be very severely depressed. Falling natural gas production will tend to further boost oil imports.

The attached charts show the trend of proven crude oil and natural gas reserves and reserve additions for the last ten years with projections to 2000 based on 1985 crude prices compared with low oil prices. Charts are also included showing expenditures for exploration and production drilling and the drilling rig count for the last ten years with estimates for 1986. These charts illustrate the negative trend in proven crude oil reserves for the U.S. despite the relatively high capital spending and drilling rates.

Non-OPEC Countries (Excluding U.S. and Centrally Planned Countries)

The 1986 drop in crude oil prices has also had major impacts on foreign oil-producing countries. A number of these countries, e.g., Mexico, Egypt, Indonesia, etc., are presently in very severe financial condition. The loss of oil revenues could negatively impact their political stability, with potentially harmful results for the United States and other western countries.

The Future Role of OPEC

The inescapable conclusion is that low crude oil prices, e.g., approximately $18 per barrel, will not permit the U.S. to maintain the current levels of proven crude oil and natural gas reserves. If prices under $20 per barrel persist for the near-term years, the decline in reserves in the U.S. will accelerate very significantly from the already declining trend in the past ten years. A continuance of low oil prices will not only reduce production in the U.S., but also in the other non-OPEC oil-producing countries as the prices will not justify the levels of capital spending required to find large quantities of crude in the relatively high cost areas of the world.

Consequently, both the U.S. and other countries of the world will not only be facing climbing imports of crude oil but the bulk of the increase in oil imports will inevitably come from certain OPEC countries with extremely large proven oil reserves and low cost production. Five Middle East countries--Saudi Arabia, Kuwait, Iran, Iraq, and Abu Dhabi--control 12 percent of the Free World's proven oil reserves. As a result, control of crude oil available for import into the industrialized countries will inevitably become more and more concentrated in these countries.

Therefore, not only will U.S. crude oil and product imports continually mount, but an increased part of U.S. oil supply will be coming from relatively unstable and uncertain sources where the potential will exist for supply interruptions and sharp increases in the price of crude oil.

Governmental Actions

What actions can be taken by the U.S. government to assist the petroleum industry in preserving a reasonable degree of oil and natural gas self sufficiency? The greatest need for the petroleum industry is to improve cash positions, but this would essentially be a matter of improvement of crude oil prices to a level sufficient to restore reasonably adequate capital spending for exploration and production. Future prices for crude oil are fundamentally a matter of market forces. However, the government should refrain from taking actions which will further worsen the financial ability of the industry.

The recent tax reform bill approved by the Joint Senate/House Committee will impose an estimated $10 billion tax load on the petroleum industry by the repeal of the investment tax credit and more restrictive depreciation regulations.

In addition, excessive and unnecessary environmental requirements would also increase costs to the industry. The Superfund toxic waste cleanup program is now in the Senate/House Conference Committee stage for a new five-year program. Proposals are being made which would sharply increase the costs to the petroleum and chemical industries. This would impose costs that the petroleum companies cannot afford under the existing prices for oil and natural gas.

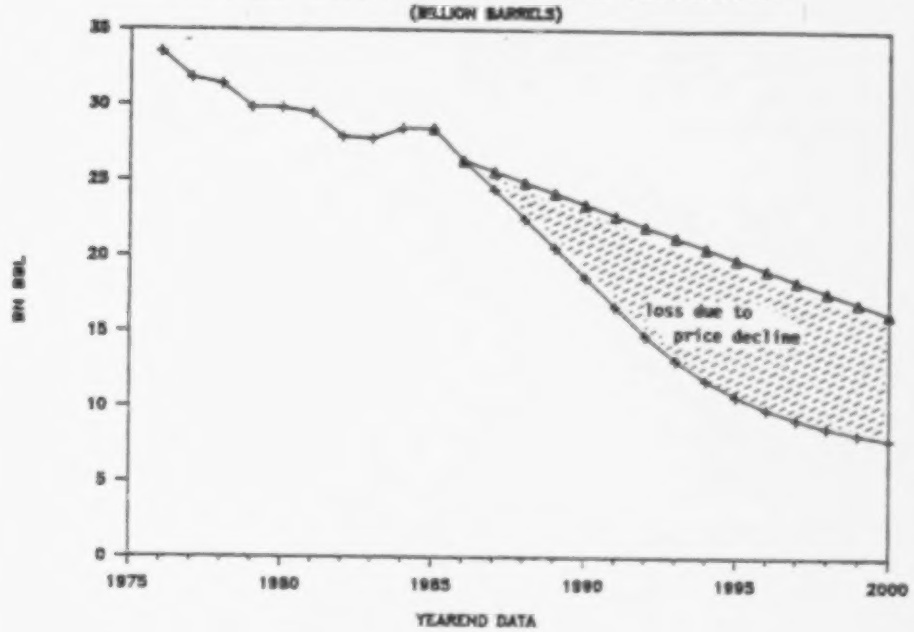
We also urge that the Crude Oil Windfall Profits Tax be repealed. At present, this tax is not operative, and therefore the Treasury would not lose any current revenue. Keeping the current tax in existence, however, would tend to inhibit capital investment by placing a cap on enhanced industry cash that would be available for investment, if crude oil prices return to more satisfactory levels in future years.

Undoubtedly, a consistent and stable federal leasing program should be adopted so that federal acreages with promising oil and natural gas prospects are available to the petroleum industry. The new five-year leasing program for the years 1987 through 1991 should be implemented on schedule and be improved over the previous five-year plan, with its subsequent lease sale cancellations and land withdrawals. In view of the limited U.S. oil and gas resource base, exploration and development of the OCS oil and gas resource should be encouraged, not impeded. Sharply restricted exploration budgets and the fact that only large reserves are likely to be economic at current and prospective oil and gas prices, will limit primary interest to areas of the world where prospects are best for large discoveries. If the most promising U.S. acreage is not available, dollars will almost certainly turn abroad. A further consideration is the desirability of reducing minimum bid and increasing the time permitted to evaluate acreage.

With respect to oil import fees or taxes which might be effective in improving crude oil prices and enhancing Treasury revenues, we have as yet not seen a clean and effective proposal that we could support.

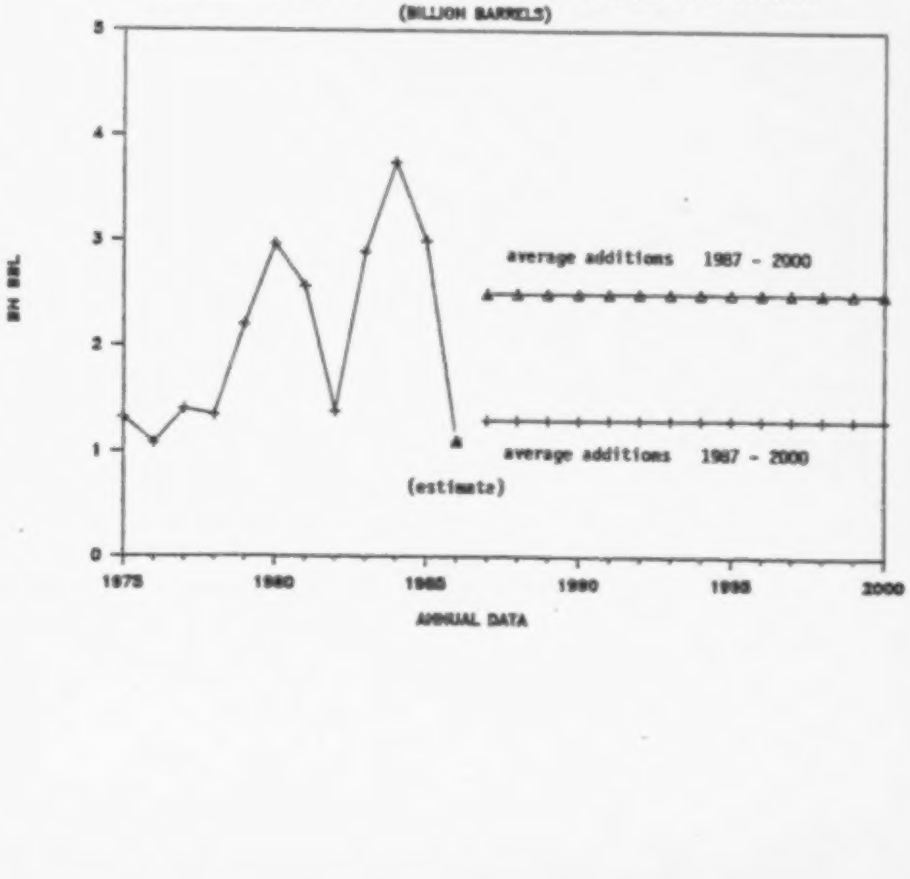
UNITED STATES CRUDE OIL RESERVES

(BILLION BARRELS)



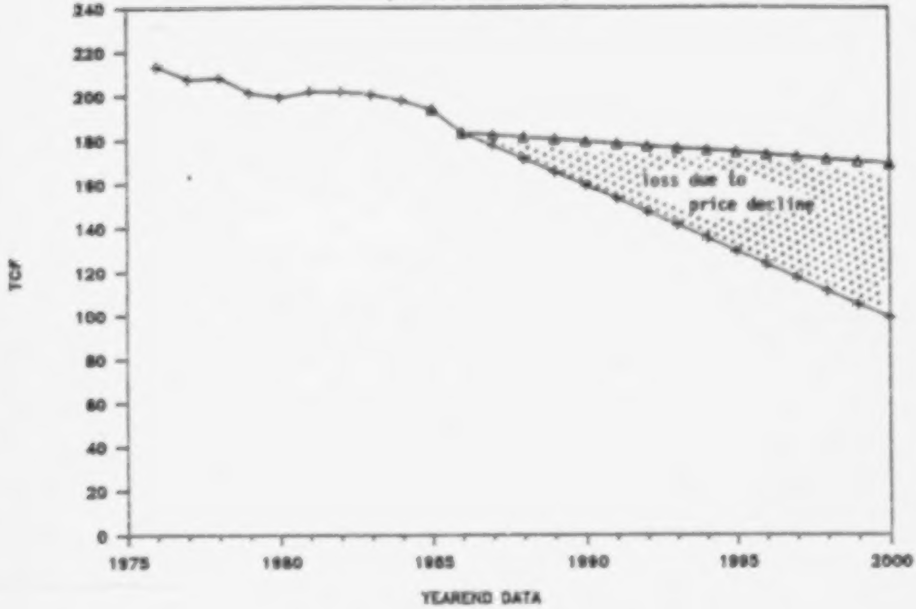
UNITED STATES CRUDE OIL RESERVE ADDS

(BILLION BARRELS)



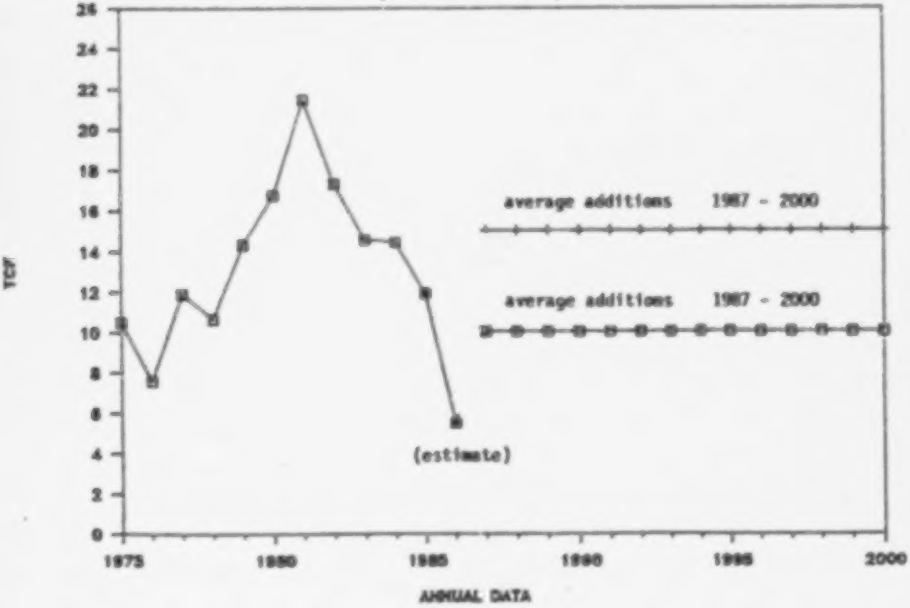
UNITED STATES NATURAL GAS RESERVES

(TRILLION CUBIC FEET)



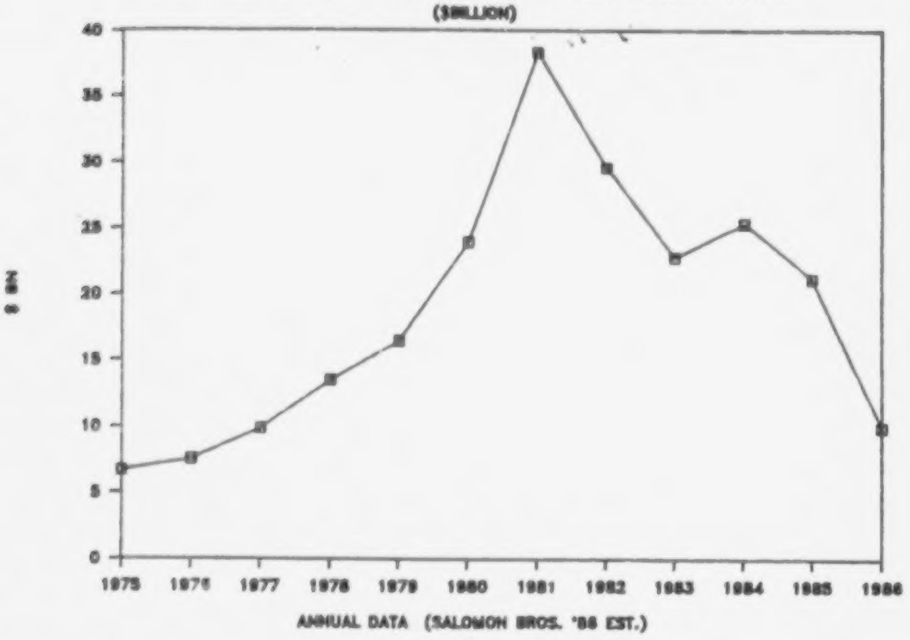
UNITED STATES NATURAL GAS RESERVE ADDS

(TRILLION CUBIC FEET)



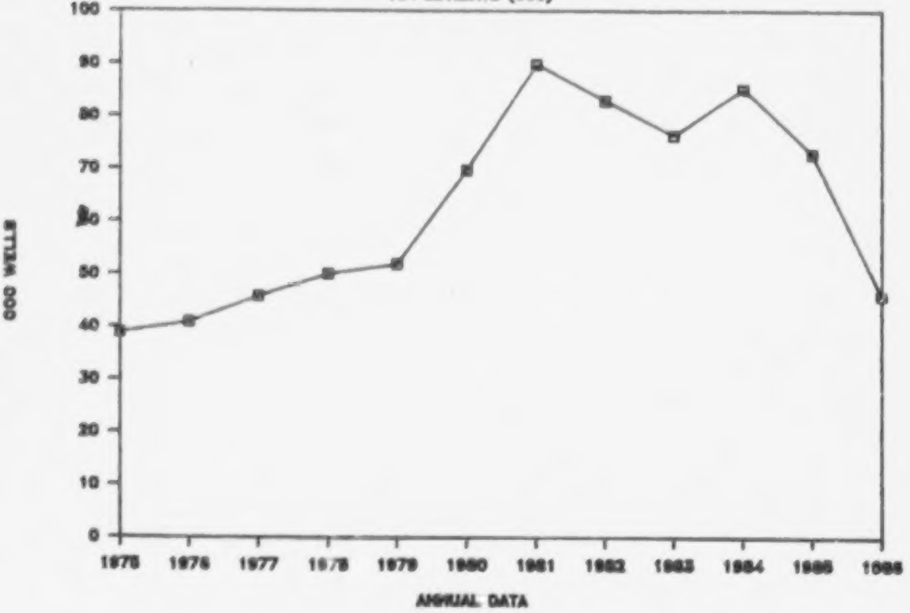
UNITED STATES DRILLING EXPENDITURES

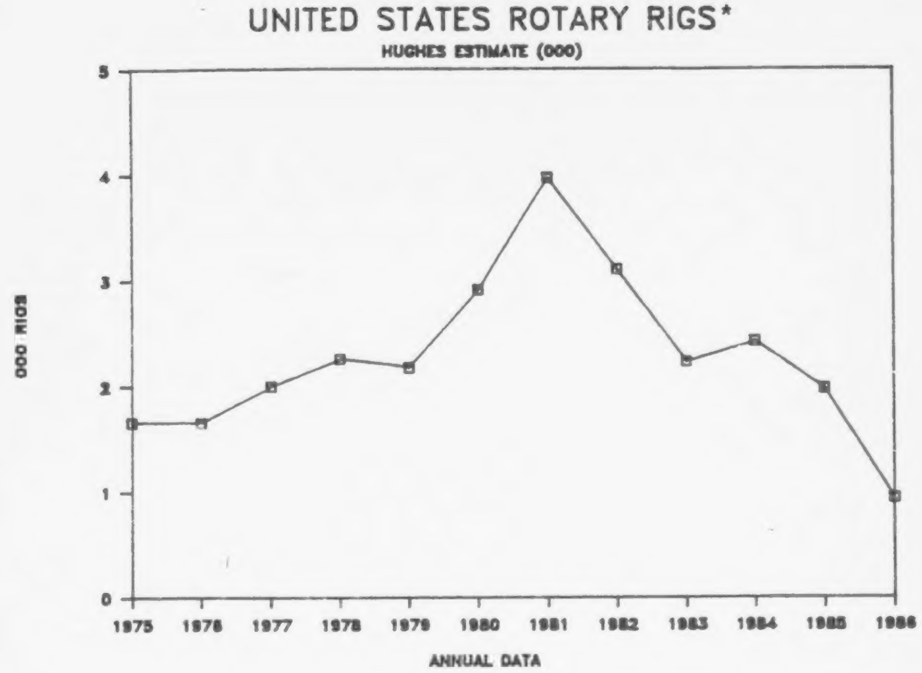
($BILLION)



UNITED STATES WELLS COMPLETED

API ESTIMATE (000)





*Rigs in operation

The CHAIRMAN. Thank you very much.

Senator Nickles.

Senator NICKLES. Mr. Chairman, thank you very much.

I apologize for not being at all of the hearing, and particularly for Mr. Akins, I wanted to catch your statement. I will take it with me and read it, as I will the other statements.

Mr. Chairman, I congratulate you for this panel. It is an outstanding panel. I wish that we had 100 Senators who were here. Unfortunately, sometimes we preach to the choir in this industry and in this Congress.

Each of these panelists I think did an outstanding job in presenting somewhat the dilemma and in some cases some of the solution. I have heard some common threads about repeal of the windfall profit tax. We did that in the Senate. It is pending in conference right now on the debt limit bill, and we are hopeful, although not all that optimistic, that the House will concur.

It is a commonsense solution Mr. Chairman, that we may add to the reconciliation package as well.

I heard some discussion on the import fee.

Mr. DiBona, I know that the API has historically, I guess, traditionally been in opposition to it. Even, Mr. Unsell, the national IPAA has been in opposition to it, although I think your task force is examining it.

Let me just make an observation.

I was very concerned that at this last OPEC meeting in Geneva, if they did not come to some type of constraint agreement of some nature on production, although it be tentative, that we could have seen a further plummet in prices, and price levels were in the $8 range when they were meeting.

They did meet and we saw the prices go up to $15 and then move back to $14.

If they had not come to an agreement, my guess was that you were going to see prices drop another dollar or two.

I just wonder, and I happen to be a very strong promotor of the free market. But I do not see that as being a free market, when you have primarily the Saudis dictating the market. If they did not come to an agreement, they were going to manipulate the market again, increase production even further and drive down prices still further.

I just do not think that we, as a country, should sit idly by and watch this industry be totally devastated, not just the oil and gas industry, but also the banks and all the attendant service-related industries.

It just does not make economic sense or national security sense, to do nothing if they took prices and drove them down to $4 or $5 which they could do.

You know, some people talk about a theoretical floor of $10, and we went down to below $9. And the Saudis were producing at 6 million barrels per day. If they jump that up to 8 or 9 million barrels a day which they could do—there is nothing sacrosanct about $8.50 or $9—I think it would plummet down to the $5 and $6 range. That would be devastating to this industry and to the economic system and to the banking system—not just in my State, but really, throughout the country.

At what point would we look at some type of measure to stop that manipulation or at least protect our domestic industry?

Mr. DiBona, I know that question has been asked of you. The API has been the group that has been more reluctant to go along with one of those proposals.

What is your response?

Should we sit idly by? Let's say the Geneva group did not get together or this tentative agreement falls apart and you see it being abrogated by all the members, and production increases from 16 to 24 million barrels, and you are looking at price levels of $6. Should we do nothing?

Mr. DiBona. Well, first let me say that what you say about the possibility of prices falling that low is entirely within the realm of the possible.

The point that Senator McClure made earlier is that this is a highly inelastic business, that is, you need only small changes between supply and demand to get massive changes in price. This is the reason that we have the current dilemma.

When you combine that with the fact that the ability to respond is a long-term matter, that is, the lead-times in this business are extreme, you have what economists call the hog cycle, because it is the characteristic of the hog business.

This industry, therefore, not only has great problems but it creates immense problems for an economy like ours, which is so dependent upon the product.

So, that could certainly happen.

What the position of the members of the API would be if we saw prices that low is it would involve the collapse of the industry—and it's already starting to occur, but it would be an absolute collapse. There would be no money spent and, in fact, at those prices, you would be shutting down all kinds of facilities. At those prices, you'd be shutting down the North Sea; that is, the cost of getting the oil from the North Sea once you have made the investment is considerably lower than the price you would use if you were making a decision to invest there.

The people I have talked to tell me that the number is something on the order of $5 or $6. But you could go to a price like that and actually see that happen.

Senator Nickles. What would you recommend if that happened?

Mr. DiBona. If that happened, I would think that the position of the members of the API would be very carefully reconsidered.

What it would exactly be and what they would come up with, I don't know at this point.

The Chairman. You just sounded like the State Department. [General laughter.]

Senator Nickles. Mr. DiBona, I am glad to hear you say that. I think we are making progress.

Let me just ask you about another comment concerning OPEC capacity.

I have been coming from a different place here.

Mr. DiBona. May I just add one other thing to that answer?

As we look at the current situation, what I have suggested will not cure all of the problem. But it is moving in the right direction.

There are things that could be done. Let's not ignore the things that can be done because we have great difficulty with the other steps.

Senator Nickles. I understand that and am well aware of that. We may be wrestling with that very soon.

But, again, I go back to the OPEC meeting that was in Geneva that did come to a tentative agreement but did give some escalation in prices. If they had not, we might have been looking at the scenario that I just explained and you agreed to, and I think most people would.

If you looked at exactly what the chairman said and you said, if you saw another couple or 3 million barrels of production dumped on the market per day, you are going to see those prices go down there substantially.

Mr. DiBona. It would be an absolute collapse. Just a collapse.

Senator Nickles. It would be a diaster, too, that is already happening.

You represent the larger companies, Mr. Eck, as well and do a very good job.

Mr. Unsell, with the independent producers, we already see that collapse.

Mr. Unsell, I compliment you on the chart which showed what producers were receiving and what foreign producers were receiving. The inequality because of the windfall profit tax, the excise taxes, production taxes, and so on, and royalties that are paid, I think help to make a very——

Mr. Unsell. What's left does not include, of course, under income, State and Federal income taxes, and employee withholding taxes, and real estate taxes, and the multiplicity of other taxes. That still has to come out of the $11.62. So, even the table, as it is prepared, does not tell the whole story.

Senator Nickles. I thank you.

Mr. DiBona, let me get back to the point on capacity. I have a little difference of opinion on what the Saudis could do or the potential of their limited capacity or when we might see that rise, or the shift, or the problem.

It kind of goes back, Mr. Akins, to a question I asked about the Saudi production capability. Most people would say yes, they can produce 9 million or 10 million barrels per day very quickly. But if they only have 1,000 wells, and maybe only 500 of them active—was that correct, from our previous discussion, something like that—well, they could, in a very short period of time, have 2,000 wells or 3,000 wells. In my State of Oklahoma, we have 100,000 wells.

It would not take that long, and they could increase their production, at least in this Senator's estimation. It may not be the maximum utilization and production development of their fields, but if they so desired, I think in a not too distant time, they could be producing 15 or 20 million barrels per day.

So they have, at least in my mindset and correct me if I am wrong, but the Saudis not only are sitting on 27 percent of the world's reserves—and I include the Soviet Union in that—but they are sitting on about 90 percent of the capacity to increase production.

In the United States, we cannot produce much more than 8.9 million barrels a day, period. In most other countries, the North Sea and otherwise, you just do not see that much of a capacity to increase production. The Soviet Union and others might be able to get another 100,000 or 200,000 and so on. Even other OPEC member countries might be able to get another 400,000.

But the Saudis are the one country which can increase production from right now 4.5 million to 6 million, to 8 million, to in a year from now if they wanted to, 15 or 20 million.

So they have about 90-some percent of the capacity to increase production, which is 90-some percent of the capacity if they so desire to really manipulate prices, particularly on the downside.

Is that correct?

Mr. DiBona. I think that they certainly are the prime example of a country that could increase production.

I don't know whether they could go to 15 million barrels a day in a year or so. But there is no doubt they could increase their production if they made certain expenditures, and they probably could do it quicker and in greater volume than anyplace else. The real question is whether they would have an incentive to do that.

Ambassador Akins probably could answer that question better than I could.

Senator Nickles. One final question, Mr. Chairman, and I appreciate your allowing me the time.

Mr. Akins, I apologize again for missing your statement. I have heard several of your comments and read some of your comments concerning the Middle East.

What is your guess? You are very familiar with the Saudis. They have this tentative agreement. It kind of has held, I think, to some extent with them and with Iran and Iraq.

Do you think they will be able to stay on this production amount of 4.5 million barrels, with a total of around 16 or 16.5 million?

Ambassador Akins. As far as the Saudis' capabilities are concerned, yes, they can do just about anything they want.

They have very large currency reserves still—about $100 billion. They can draw those down if they want to. They are drawing them down.

So they have a wide range of options.

They have said, however, that they are never going to increase their production over 5 or 6 million barrels per day.

You are quite right: Technically they could go up to 20 million barrels a day, and a few years ago, the American oil companies were talking about Saudi Arabia increasing to 26 million barrels a day. But no Saudi ever mentioned that figure. No Saudi ever mentioned 20 or 15 million barrels a day.

So, when you talk about the total available in the world or the total available in Saudi Arabia, you have to really consider what the Saudis themselves want. The Saudis are a small country. The population that they have is not more than 6 million.

They have no illusions of grandeur. They cannot become a superpower. The action that they took to bring down oil prices had nothing to do with the statements that are frequently made in the American press about the Saudi goals.

They were not trying to destroy the oil market. They were not trying to destroy OPEC. They were trying to restore some discipline in the oil market. They had been threatening to do this a year before they took the action.

The said the non-OPEC countries are getting a free ride from OPEC; they produce at capacity and sell just below the OPEC levels; and the OPEC countries themselves were cheating.

They said that if this persists, they were going to take action.

I was at an OPEC meeting when Yamani pointed around the room and said, "If there isn't discipline, there is going to be a price war, and if there's a price war, there's going to be a revolution in your country and in your country and in your country, and we will survive very nicely" [indicating].

Nobody believed the Saudis would take that action because they are basically very conservative and very careful.

But they did take the action. And they have been hurt. And now nobody says Saudi Arabia is just bluffing. They know the Saudis are serious.

The question that you asked is will this agreement last? I think there is a 50-percent chance that it will last.

There is a 25-percent chance that we will have another serious price war, that somebody will cheat and that prices will go down again to $10 or below. Then I think we will have an agreement.

I have no doubt in my mind whatsoever that within 2 years, there is going to be a firm oil market. This is why I am so strongly in favor of the oil import fee right now, because we have to do something to restore the confidence in the industry and in the banking industry. If the industry knew that they could get $25 a barrel for their oil, right now, and they knew this was the American Government policy, and you would change your import fee every month according to the Rotterdam spot prices to make sure that the price of oil were stabilized at $25 in the market, then we could resume our drilling programs.

All of these other things that we have talked about—I don't know why the industry is so hesitant to talk about this. The windfall profit tax—fine, that would do something. Advanced leading—fine. As long as the price stays low or, much more important, as long as there is this extraordinary uncertainty in the market, nothing is going to be done.

If OPEC reaches an agreement and the price goes to $28 a barrel, how long is it going to take to resume drilling in the United States? A long time, because people's confidence is already destroyed.

If we have the other scenario that I described, the worst one, that is, an OPEC agreement, cheating, and then another OPEC agreement, it will take a much, much longer time before confidence is restored. And in this interim period, the American industry collapses.

If what we want to do is to protect American security—and I presume that is what the goal is—we have to do something to increase domestic production. We have to also increase conservation measures. Conservation, in spite of what the Government people said, is not very interesting when the price of oil is $8 a barrel.

But it is very interesting when the price of oil is $30 a barrel or higher, and the prospects are even higher.

I am perturbed by some of the statements that have been made here, even by the industry people, and the reluctance to talk about the one action that I can see which would really preserve the industry and preserve the security of the United States.

I understand the objections to it. I have read every single objection that has come up. And, as I said before, it is the worst possible solution, except for all the other solutions.

Action has to be taken.

Maybe it cannot be done. Given the position of the administration, it can't be done. The President has said we will not have this.

But I am not presuming by hoping that the attitudes of the administration could change.

If you look at the facts, and the facts are incontrovertible, even the facts given by the administration, if the present situation continues, we are going to be importing 7 to 10 million barrels a day of oil within a decade.

This is hair raising. It is frightening. Action has to be taken to prevent that.

How? Market forces, says the administration. This is nonsense.

Senator NICKLES. I appreciate your comments.

Mr. Chairman, thank you very much.

And to all of our panelists, I thank you for your appearance here today.

The CHAIRMAN. There is some feeling on the part of some that this President is a saber rattler, that he threatens the use of military force too soon, too often, and too loudly.

There was an earlier war-mongering President and his name was Carter, who threatened the use of military force to keep the supply of oil flowing from the Persian Gulf.

I mention this because our attention, as an American people, our attention span is about that of a 3-year-old. Perhaps I malign 3-year-olds. [General laughter.]

There is an alternative. The alternative is to do nothing and take the risks and build up our military capability and threaten to use it and don't try to compete economically; compete militarily. That's what the Soviet Union does. Their only successes have been in military intervention and the use of military force.

They are not successful economically. They are not successful politically. But they can be successful in the military sense.

I see people in this country who begin to want to mirror that strategy.

I was on the U.S.S. *Midway* in the gulf of Oman while our airmen were flying combat missions over the Persian Gulf in 1983 to protect the flow of oil.

I look at our military capability and our budgets for the military and recognize that the security of this country, as affected by the availability of oil, is reflected in the needs of the Military Establishment. And we'll spend billions of dollars for that and not one dime on the economic security aspects of oil production.

And I am supposed to be a hawk. Well, I see all these doves around this place who do not want to spend one dime to help the energy security of this country.

This does not mean that I have turned my back on the military. It does not mean that I have become less of a hawk, if that is the right term. I really am a kind of chicken hawk. I want to be strong, but I am afraid of the condition that might cause us to use it. I want to be strong so we do not have to use it.

But here we are, saying that, believing that, and preaching that as a country, and allowing conditions to exist and to get worse that are perhaps the most immediate threat of the use of military force for the United States.

I just do not understand how this Nation and how the people who report the news and make the news and create the public perceptions fail to make that terrible linkage.

I mention that because I remember meeting with some Idahoans who were aboard the U.S.S. *Midway,* and the first question that I got from one of them has stuck in my mind and haunts me. He said, "Senator, does anyone know we're here or care?"

I just keep remembering that. It keeps being played back to me.

He knew they were there. He knew the risks they were taking. He knew the risks this country was under. And he could not understand why the people in the United States did not respond with the concern that I think has to be so evident.

Let me turn for a moment from that, though, because I am preaching to the choir with this panel. I am really trying to reach beyond it, I hope, by stimulating some concern about that matter.

You apparently have to overstate it in order to get any kind of attention, and I do not like to overstate things.

Where is the best prospect in the United States for large additions to production capacity?

Mr. Eck, would you answer, without revealing all of your company's secrets?

Dr. ECK. I guess you would have to ask at what price. But, irrespective of price, it is clear to me, anyway, that the best prospects for natural gas are in the gulf, unleased areas of the gulf; for oil, maybe offshore California and the unleased areas of California. Alaska—there is no question it is a big potential, but it is essentially uneconomic at the present price levels.

So, I think effectively we have to write off very much additional interest in Alaska unless something fairly dramatic happens to the world price structure.

The CHAIRMAN. Mr. DiBona.

Mr. DIBONA. Yes, I would agree with that, particularly southern California for oil. As far as known resources that could be produced and explored at current prices, that is probably the best prospect.

The CHAIRMAN. Mr. Unsell.

Mr. UNSELL. Yes, I think they are right. I would only add that I think at some point in time at a given price we are going to find some way to cover substantial additional quantities. We have 400 billion barrels of unrecovered oil in fields where we dissipated the natural reservoir pressure earlier on, and if you could recover 1 percent of that, that is 4 billion barrels with no finding costs. I think that is a potential that a lot of people in the industry still think down the road will be substantial.

The CHAIRMAN. Ambassador Akins.

Ambassador AKINS. I pass.

The CHAIRMAN. All right.

Mr. UNSELL. Senator, may I comment further?

The CHAIRMAN. Surely.

Mr. UNSELL. You said the other option was just to protect the oil. That I think assumes that you can protect oil in movement. But so many times we have had, as Senator Ford alluded to earlier, he said don't think there won't be another supply disruption. A lot of people forget that we have had just about a dozen—isn't that right—since Premier Mossadegh shut down the Iranian industry in 1951. The Suez Crisis was another big, dramatic example. But we have had pipeline sabotage and we have had about a dozen major supply disruptions.

If you ask someone do you remember the 1967 embargo on oil, they would say no, because we were not affected by that. We still had a little bit of excess capacity to produce in this country.

Only the last two of this dozen disruptions affected us. So, even if you had the Army, Navy, and Air Force over there and Iran or one of those countries decided to close everything down, I don't know what you would do about that. I just don't.

The CHAIRMAN. I think we have learned something, though, which is worth noting. It is not all totally gloomy.

In 1973 and 1974, at least half of this country knew, as a matter of fact, that the Texas Railroad Commission was the reason there was a shortage; and if you could just get the Texas Railroad Commission to open up the valves, there would be plenty.

Do you remember that?

Mr. UNSELL. Yes.

The CHAIRMAN. You are old enough to remember that.

Mr. UNSELL. I also remember when Britain and France went shooting their way into Suez and Secretary Dulles, the first thing he did was to call General Thompson of the Railroad Commission up here and say how much excess capacity do we have. He put that in his briefcase and went over there, and with the assurance that we could supply their oil needs—which we did, we lifted 600,000 barrels a day off the gulf coast and sent it to Europe for 6 months—by that fact alone was he able to convince Britain and France to back out of Egypt.

The CHAIRMAN. I remember, too, in 1974, when we attempted to increase immediate production by opening all the valves, nothing happened, or virtually nothing happened. And the estimates of our capacity to produce instantly because of shut-in or restricted production was proven to be false. Also, that half or better of our country that just "knew" there was some kind of conspiracy out there to keep us from getting it finally found out that there wasn't any, that it was not there to be had.

But we have gained something in terms of base knowledge of where we are starting from.

I want to ask this question.

You have indicated offshore California, the Gulf of Mexico for gas, some increased recovery in domestic sources and Alaska as major opportunities for increased production in this country.

How much price do you have to have? Assuming it was all available to you, what price do you have to have to move it offshore California?

Mr. UNSELL. You have to have access first.

The CHAIRMAN. Let's just assume that for a moment and not talk about access. I do not even want to get into the question of how much does the Government cost you in terms of access.

Mr. DIBONA. We currently have an oil rig circling around. One company has an oil rig at $200,000 a day being towed in circles out there because the California Air Resources Board won't let them put it into place. You do not want us to count that kind of thing, do you?

The CHAIRMAN. I do not want you to talk about that for the moment. I just want to know what price. If we had a policy that said go and drill, what policy would it take to get you to go drill offshore California?

Dr. ECK. I guess I would like to rephrase that question because I am afraid that there are not enough elephants out there to fill the circus. If you look at the history of U.S. reserve ads, they really have not been elephants in the last 10 years. We have not found any.

The CHAIRMAN. Except Prudhoe Bay.

Dr. ECK. Well, that's—in the last 10 years, whatever.

We just really have not made big discoveries. We've been able to more or less maintain reserves in this country, and our company has been a leader, incidentally, in finding these smaller resources, in finding the relatively small reservoirs that had been economic in the $25 to $35 range.

So I do not think there is any hope of maintaining oil resources in this country sufficient to maintain production with elephants.

So the right question I really think is what price does it take to have any hope of maintaining gas deliverability in this country and arresting the decline in reserves. I think that price is certainly in the $25 range. I thought that is roughly what is needed.

The CHAIRMAN. I want to look at some specific issues and not the general picture at this point.

What does it take to move offshore California?

Dr. ECK. Well, again, it depends. If you hit a really big reservoir, you know, you can probably afford to develop it in the $15 to $16. Unfortunately, the chances of hitting a really big reservoir are not all that great. So that is a problem.

The CHAIRMAN. All right.

Mr. DiBona.

Mr. DIBONA. I don't know the answer, but I can give you an answer about the generality, if you want that.

We did ask the companies to give us an estimate, as I mentioned earlier, at different price ranges. At $28 a barrel, we slightly increased production over the next 5 years.

The CHAIRMAN. Gentlemen, I am trying to focus on specific areas because we have specific policies up here.

Mr. DIBONA. Well, I think the people are going to—let me say that I don't actually bid on a particular site and, therefore, I don't know what they do.

The CHAIRMAN. But you have friends that do.

Mr. DIBONA. Yes, and I don't ask them about price.

But what I suspect they do is make a judgment about what the price of oil will be at the time they are producing it, so that the current price of oil may not be the relevant number to use in trying to determine this. You know, people are interested in Alaska.

The CHAIRMAN. I accept that.

What expected price of oil will it take to get people to invest in offshore drilling off California?

Mr. DIBONA. I think their current expectations, because they will go off California.

The CHAIRMAN. Mr. Unsell?

Mr. UNSELL. I was just going to say that I think nobody can give you a fixed price. But I think one of the important things—and we were talking about this while you were out of the room—is that to get this industry going again, whether it is offshore California or what, stability is more important than what is going to be the price tomorrow.

The CHAIRMAN. Well, if we had a stable $10 price, would you be happy?

Mr. UNSELL. I had a very experienced producer in Louisiana tell me the other day if I had a price range of $20 or $22 and knew that I could rely on that for the long term, that would be a lot better than having a $40 price tomorrow and being nervous about the rug being jerked out from under that price at any given morning.

The CHAIRMAN. That's hopeful.

Do you have any estimate of what expectation of stable price it would take to get people to move offshore California?

Mr. UNSELL. I think Mr. Eck is right. I think it is in the $22 to $25 range, if they had reasonable assurance that that would be a stable price for the long term.

The CHAIRMAN. Now how about enhanced recovery? You are talking about recovering some from the old fields, that 1 percent you were talking about. At what price?

Mr. UNSELL. I do not know that there is anyone who has the ability to calculate that.

The CHAIRMAN. Well, there has to be some price range.

Will $10 do it? The answer is no.

Mr. UNSELL. No.

The CHAIRMAN. Would $100 do it? The answer is yes.

Mr. UNSELL. Yes, that's right.

The CHAIRMAN. Now, somewhere between $10 and $100, you begin to get some measurable activity, do you not?

Mr. UNSELL. That's right.

The CHAIRMAN. Can we narrow that range a little?

Mr. DIBONA. It's probably something over $20.

The CHAIRMAN. Something over $20 for enhanced recovery.

Mr. DIBONA. Yes, because as the price rises, you will get more activity and people will do increasingly more difficult and expensive things.

The CHAIRMAN. Of course. I am trying to relate that to some specific resource opportunities because we have specific policies.

Mr. DIBONA. That's right.

The study that we did suggests that if you want to stabilize U.S. production, not increase it, you're in the $28 range.

The CHAIRMAN. Gentlemen, I am having a heck of a time trying to get you to answer a question that I think is crucial to us. If you cannot answer that, how can I make an argument up here?

I am fighting the battle in conference against Outer Continental Shelf restrictions in California. I have to fight it every year. You are not helping me a darn bit if all I can say is oh, gosh, I do not have any idea of whether they will drill out there or not.

Mr. DIBONA. Senator, I can tell you that at the current and expected price, they will bid on offshore California and they will drill it.

The CHAIRMAN. All right—at current and expected prices?

Mr. DIBONA. That's correct.

The CHAIRMAN. We do not have to do a thing about price stability. All we have to do is remove the restrictions and you would get some drilling activity there.

Mr. DIBONA. If the price is lower, they will bid lower.

The CHAIRMAN. Surely. I understand that.

Dr. ECK. I would just like to distinguish between drilling and development.

Development is the big money.

We will drill offshore California probably at the present price level. We would drill one or two exploration wells and get a feeling for what is out there. But we are not going to put any big money in offshore California unless we just happen to fall onto a Prudhoe Bay, you know, at $16.

We are not going to put the big dollars in there are prices below $20.

It is critical to distinguish between exploration drilling and the development drilling.

The CHAIRMAN. I am glad you made that comment.

I have a second question.

Mr. DIBONA. But that is the price 3 years from now, after you have gone through the whole process.

The CHAIRMAN. I understand that. But you are telling me that the current market expectations of the people who you represent are such that you would do exploration drilling at current market, and you would do development at the expectation of $20 or $22 a barrel, off California.

Dr. ECK. [Nods affirmatively.]

The CHAIRMAN. I did not ask you to confirm it, but you have the opportunity to deny it.

Dr. ECK. I think that is true. That happens to be what we identified as the best place to look for oil in the United States now.

The CHAIRMAN. That is the best place.

Dr. ECK. Right.

The CHAIRMAN. OK.

Second, you have indicated something around $28 or $30 a barrel for enhanced recovery. Is that real?

Mr. DIBONA. Well, there may be some that you can do at a lower price. You will get more capability—I can only tell it to you, because each prospect is going to be different.

The CHAIRMAN. Surely, I understand that. It is in a range.

Mr. DiBona. And you will get much activity at something like $28 to stabilize production. I mean, that is the best summary that I can make.

The Chairman. I don't want a summary and you keep giving me a summary.

I do not know how to say it to you.

Mr. DiBona. But I don't know the answer to your question.

The Chairman. Well, then how can I help you to make policy?

Mr. DiBona. You have to ask an individual company that, in fact, is doing this how they make that calculation. So you are really asking the wrong individual here.

The Chairman. Well, I will ask you to ask the companies and give me their answers and that will insulate them from any proprietary information.

Mr. DiBona. Yes, and I will pass that on to them.

Mr. Unsell. That's a part of it. But, you know, the Federal Government, through the Federal Power Commission and now the FERC has, for 30 years, been trying to figure out where you set the price of gas to elicit the optimum demand and the optimum supply to fill the demand, and the Federal Government, with all of its wisdom, cannot figure out the magic number on a price.

The Chairman. Mr. Unsell, you know that no matter how poorly it is done in the private sector, the government can do it worse. [General laughter.]

Mr. Unsell. The other point I was going to make is this.

This market is sort of like Wall Street. We saw it during the escalation of oil prices. From the late 1970's up, every incremental price increase brought on new opportunities that people saw in the business.

One example was this little southern county of Ohio, where people knew for 100 years that at very low depth there was oil there.. But not until the price hit $30 did they have development over there. The Washington Post ran a front page article about the oil boom in southern Ohio, where we have known the oil existed for 100 years.

The Chairman. Obviously, as the price broke in 1974, 1973-74, we began going back in fill drilling. There was a lot of cheap and easy oil to be found at the prices that prevailed in 1974 and 1975, when there was a dramatic increase from the average of $3.60 that had been paid in this country prior to that time.

Now, again, I am going to try one other place—Alaska.

Mr. Unsell. We were drilling 27,000 wells that year.

The Chairman. The Arctic National Wildlife Refuge.

What kind of expectation of price does it take to induce not just drilling a well, to find if something is there, but assuming you find something is there, to develop that resource?

Mr. DiBona. I don't know the answer to that question.

Dr. Eck. I am convinced that it is about $20.

Now, if we found gas, incidentally, it is going to be a whole lot more than $20—something like $40, I suppose.

In the case of oil, I don't think anybody would pursue any exploration or development drilling on any substantial scale below $20 a barrel.

The Chairman. Let me ask you this question.

Saudi Arabia's Oil Minister, Yamani, has stated—and I asked this earlier—that he believes that price stability can only be attained through long-term free market equilibrium. In his judgment, this could be achieved—could be achieved—after a 6-year transition period, or by 1992, at an average price of $20 per barrel.

Do you agree with that statement?

Mr. Eck.

Dr. **Eck**. What I think he is really saying is "come into my den." No question, if he can hold, or if prices are held below $20, the world will have to come to his store to buy oil. And if you define "equilibrium" as the condition where Saudi Arabia controls a much larger share of the market, he is right. If you define "equilibrium 'as a condition where we are less than 50-percent dependent on imports, then he is wrong.

The **Chairman**. I understand that. But is he right?

Dr. **Eck**. From his point of view.

The **Chairman**. No, from your point of view.

Dr. **Eck**. I consider the equilibrium price of oil in the world to be something like $25.

The **Chairman**. All right.

Mr. DiBona.

Mr. **DiBona**. I think the effect of that would be fairly sharply increasing imports in this country. At $20 a barrel, we would be increasing our import levels fairly rapidly.

The **Chairman**. All right.

Absent a change of policy on the part of the United States, is he right?

Mr. **DiBona**. Do you mean would there be stability?

The **Chairman**. At $20 a barrel in 1992.

Mr. **DiBona**. That would depend upon whether the Saudis chose to rapidly increase their output of oil.

The **Chairman**. All right.

Mr. Unsell.

Mr. **Unsell**. I would like to respond to the whole gist of this discussion by saying that in our continuing analysis, we have found that over time, over the last 8 years consistently, we have found and developed about 20,000 to 22,000 barrels per day of new domestic oil and gas production, the gas being expressed in oil equivalent, for each billion dollars the industry had available to spend.

Now, we are going to spend about $15 billion this year. So, obviously, that is not going to be enough because we have a 10-percent decline rate in existing production. Our production will decline today if we did nothing—no drilling. It would be 800,000 barrels, roughly, lower by this time next year, than it is now.

This means that you are going to have to spend $40 billion to stay even between now and the year from now.

There is no way in the world we can do that.

This chart that I have in my statement shows the production paths of three different price levels. At $27, based on our experience, as I just explained, the supply response should get to a billion dollars in expenditures. At $27, we are going to increase production slightly by 1995.

At $20, it is going to decline by over a million barrels, by almost 2 million barrels a day.

At $13, it is going to be below 6 million barrels a day, and we are going to be importing over 60 percent of our oil.

So, you have to just look in terms of the overall industry and what the experience has been in the supply expenditure response.

The CHAIRMAN. I understand that.

My question to you is what can we anticipate in terms of the world market price and what will it do to the choices we have in this country?

That is why I was asking the question of whether or not you agree with the statement attributed to Mr. Yamani.

Mr. UNSELL. I am not sure that the United States vital interests can rest on the free market under his interpretation or anyone else's.

As I said earlier—when I think you were not here—I think we have reached a point, whether it is through Mr. Akins' idea of an import fee or a combination of other actions, where if we are going to have a reliable domestic energy supply base—oil, gas, coal, and the rest—we are going to have to buy some insurance. We are going to have to pay an insurance premium to get that. And how we do that, I don't know.

The CHAIRMAN. I understand that. I am just trying to figure out what kind of policies we ought to be adopting and that depends upon what we expect the price to be.

If we expect the price to be $30 a barrel 18 months from now, that is a far different thing than if we expect the price to be $20 a barrel or below for the next 6 years.

Now there are consequences to either scenario.

I am trying to figure from you fellows, who are the experts, what the answers are.

Mr. DIBONA. I was trying to answer that question.

The CHAIRMAN. Yes, and you did in general terms. But I also wanted to look at specific choices.

We have an OCS moratorium question. Now, should we break our pik politically to get the Outer Continental Shelf moratorium in California raised? And will you go and drill if we do?

If you will not go and drill, why should we expend the political capital that is necessary to try to get that done?

If the price expectation for the foreseeable future is such that you are not going to drill in the Arctic National Wildlife Refuge whether or not you are permitted to, why should we go through the political turmoil of trying to open it up to you to have you say later well, the price isn't right, and we are not going to go there anyhow?

Why should we worry about Georges Bank and the Atlantic any more because when you had it open, you didn't drill?

Why should we go back and fight a political battle and pay a price in something that yields no benefits either to you or to the country?

We have plenty of fights around here without taking on meaningless ones.

Mr. DIBONA. Well, let me try to answer your question.

The CHAIRMAN. Let me get Mr. Akins' response first. He has been raising his hand.

Ambassador **Akins**. I want to say something about the Yamani statement.

I do not think there is any doubt that if the price stays at $20 or below, supply and demand will come back into balance within 6 years. I don't think anybody here would disagree with that.

Would you?

Mr. **DiBona**. That's correct. We would eat up the surplus.

Ambassador **Akins**. OK.

But then, the other part of the statement of Yamani, then we have stability, is of course, totally, totally incorret. You would not have stability.

If supply and demand are in balance, we have an extraordinarily precarious situation and any disruption in supply will cause a tremendous price increase.

This does not have to be done deliberately. It can be done by revolution in a minor country that exports oil.

This statement has been made and referred to several times of Yamani, in the press and elsewhere. The other statement made 3 days ago by Minister Subroto of Indonesia, saying he expected prices to stay at $14 a barrel, caused the market to plunge, and the futures market plunged by a dollar and a half, after the Subroto statement.

But I would like to put both of these statements into context.

Both of these men were not speaking to the United States or to the consumers in general. They were speaking to OPEC. What they were saying, essentially, is if there is no agreement in OPEC, these are the consequences.

The consequences are very pleasing to professors at MIT and Harvard: A $6 or $14 price for oil for the indefinite future. But it is not very pleasing to the Finance Minister of Nigeria or Venezuela. What both of these men were saying is boys, you'd better get an agreement, or else these are the consequences.

The consumers may have no trouble living with $20 oil. They don't worry about what happens in the United States. That is our worry. And it is not up to Yamani or Subroto to worry about what we do to protect ourselves. We are the ones who have to do that.

But they are saying if we do not take action to protect the price and to limit production, these are the consequences, and what will happen to you in Venezuela after 2 years of $15 oil, when all of your currency reserves are going to be exhausted.

The Venezuelans are focusing on that, and so are the Nigerians and all the others—the Egyptians, the Omanis, the Russians, the Chinese and all. And it is a warning that they are giving to the people in OPEC: By God, you'd better get an agreement very quickly, or else.

The **Chairman**. Mr. DiBona.

Mr. **DiBona**. I think I was going to say roughly the same thing.

In 3 to 5 years at $15 to $20 a barrel, we would be importing 50 to 60 percent of our oil, depending on the price, whether it is $15 or $20.

The production would be declining to the point where we would be producing about 6 million barrels a day. Any disruption under those circumstances is going to be a major problem to us.

The anticipation that prices would rise from that point has to be high.

The CHAIRMAN. How long does that take?

Mr. DIBONA. Pardon—how long?

The CHAIRMAN. Yes.

Mr. DIBONA. How long would it take to arrive at this?

We think that you would be at 80 percent of OPEC capacity at $15 a day in 3½ years from now, and clearly in 5.

The CHAIRMAN. Thank you.

Mr. Eck.

Dr. ECK. I would like to point out that we do not use point estimates of future prices in the corporation. I rather doubt other large companies do, either.

As I indicated in my opening remarks, I cannot forecast prices and my company knows that. So what we do is we have a sort of range of prices, and we will bid on prospective good acreage.

We just got through bidding on a large acreage sale, and we took a lot of acreage.

We will take that acreage into our inventory. We will do the geologic and geophysical work on that acreage. And if we discover a big structure, we will drill it at today's prices. We will do the exploration drilling at today's prices.

If we find a giant reservoir, we would probably develop it at today's prices based on expectations that maybe things will get better or at least the possibility that they will get better.

The smaller reservoirs, when expectations improve, they will be drilled. But I think it is just wrong to say hey, let's just not permit the opportunity for the industry to look at this acreage because they are not going to drill. They will drill.

Mr. DIBONA. But what you do is you add to the leadtime, and that is the problem.

Once we get into this jam, it is going to take us several years to bail out.

Dr. ECK. The really good reservoirs will be developed. There is no question about that.

The CHAIRMAN. That was the other question I was going to ask. To refresh the memory of some and to get this into perspective, what is the leadtime?

Mr. DIBONA. Well, the leadtime in some of these offshores, in the deep water and in the difficult terrains, like up in Alaska, you can be talking 5 years before you see any significant production and 10 before you are at the maximum.

So we are at very, very long leadtimes.

The CHAIRMAN. But if I read you correctly, you are all saying that within ten years, oil prices are going to be higher.

Mr. DIBONA. Well, we don't know what is going to be in 10 years. We are pretty sure in 5.

Dr. ECK. I would dispute that.

I would say that there is a possibility, even maybe a probability, and there is no certainty on this. One can construct a scenario that prices would stay low for a sustained period of time.

There is no certainty.

The CHAIRMAN. Gentlemen, thank you very much for your testimony.

It has been a stimulating discussion and I think the statements in your testimony, taken as a whole, present a real challenge to this country in terms of policy. There are policy choices, and just as there is a range of response to oil prices, there is also a range of response in policies.

You are not going to see Congress just abandon any attempt to refine policy. That is an adjustable political fact, just as there are adjustable economic considerations.

Congress is not going to just say hey, fellows, we are going to guarantee you *x* rate of return and open access to everything just because that is good for you. Congress is going to retain some options to make some policy choices, too. And that range of policy choices is just as broad as the range of economic choices.

I was pushing a little on some specific issues because we have specific political issues before us right now, specific policy choices that Congress is making one way or the other.

I guess that I would say, in essence, the more specific you can be in terms of your predictions—and I realize there is hazard in that—helps us to make more specific policy choices in a timely way. It isn't as though it is all or nothing on our side and everything is variable on your side of these choices. It just does not work that way.

I have a copy of the speech made by Sheik Yamani at Harvard on September 4, and that will be made a part of the record as well.

Gentlemen, thank you very much for your willingness to appear and testify today. It has been very helpful.

[Whereupon, at 1:05 p.m., the hearing was adjourned.]

[The speech of Sheik Yamani and a statement from the Petroleum Marketers Association of America follow:]

OIL MARKETS, PAST PRESENT AND FUTURE

presented at

HARVARD UNIVERSITY

on

September 4, 1986

by

AHMED ZAKI YAMANI

Distinguished Ladies and Gentlemen,

When crude oil prices started to rise during 1973-74, it caused a furor in the consuming countries. The increases were variously described as...shocking...as bound to precipitate depression...as inhibitive to growth...and a sign of doom. OPEC was stigmatized for all time to come as a cartel, whose aim it was to hold the world to ransom. Consumer reaction was even more volatile when the prices of oil rose to much higher levels during the period 1979-81. The economic recession which had befallen certain industrialized countries became associated with what has become known as the "second oil shock." The high oil prices were blamed for inflation, high interest rates, balance of payment deficits, unemployment and, ultimately, economic stagnation.

I do not intend here to examine the validity of such contentions. Suffice it to say in this regard that Saudi Arabia is a part of the free world and, as such, a firm believer in free enterprise and the forces of supply and demand. At the same time, Saudi Arabia believes that oil is a special commodity whose availability to the free world should be ensured without disruption. Its price should, therefore, be set at a level that fulfills this objective. Understating or overstating that price level could lead to short-term or even long-term supply disruptions. As one who has carefully observed the attitudes to OPEC in the past 13 years, as reported in the media; having followed the criticism, informed and otherwise, of the Organization's pricing policies, I have not been in the least astonished to note that, with the dramatic fall that has taken place in oil prices since January of this year, OPEC has once again become a target to campaign against. OPEC, it is claimed, has precipitated a price collapse. The same quarters that voiced criticism of OPEC in the past are now speaking of the "third oil price shock" - this time, of course, in reverse.

Ladies and Gentlemen,

I find the appellation "oil price collapse" somewhat strange. While it is true that prices have fallen sharply in recent months, surely their present recovery indicates very clearly that they have escaped total collapse. In fact, a collapse may not happen at all. Although consuming countries can now import oil at bargain prices, the effects of such cheap oil on their economies tend to be ignored in the welter of criticism directed against OPEC. The consuming countries charge, inter alia, that cheap prices have a negative impact on indigenous production of energy, be it oil, coal, gas or nuclear. Low prices, they say, do not provide sufficient incentive for exploration and development of local oil reserves, a consequence which will eventually lead to a decline in domestic production of oil and other energy sources and, ultimately, to a higher degree of dependence on imported oil.

Hence the call for import restrictions. But import restrictions, if adopted, might have an adverse effect on friends as well as those whom the advocates of restriction regard as their adversaries. In addition to the negative effects such restrictions might have on world trade, they would, in fact, also hurt more directly those big oil exporters whose supplies are more or less considered secure, either because those exporters are neighbouring countries, or because they are countries classified as traditional trading partners. Countries like Mexico, Canada, Venezuela, the U.K., Norway and Russia account for a big share in the imports of industrialized countries. Thus, the advocates of trade barriers on oil, in order to avoid hurting those countries, modified their scheme, proposing a kind of selective applicability of trade barriers that would exempt those countries from their efforts, although they must know full well that discrimination in world trade provokes retaliatory measures, can lead to trade wars and spell the end of free trade practices. Such a vociferous demand for the imposition of trade restrictions, on account of low prices, as is currently prevalent, could constitute an invitation to producers to raise prices again, to restore them to their former levels - and was it not those same high prices that evoked so much condemnation on the part of importing countries in the past?

The truth of the matter is that prices have fluctuated considerably in the past 16 years. From a level of $1.80 per barrel in the 1960s, they were increased to a range of $10.84 to $12.70 in the period 1974-1978. Between 1979 and 1982 they ranged from $18 per barrel to $34 per barrel, the latter price reflecting their peak. They commenced their downward slide in 1983-85 with a range of $29 to $28 per barrel. In January 1986 they dropped sharply down to $22 per barrel. They continued moving downward in leaps and bounds until they reached a nadir of $9 per barrel in July 1986. They have been recently restored to about $14 to $15 per barrel.

Ladies and Gentlemen,

Such fluctuations have caused tremendous instability in the world market. This instability is the underlying cause of discontent among both producers and consumers. For the producers, it underscores their dependence on residual world demand and the upward or downward movement of that demand under the coordinated guidance of the consuming countries. Residual demand determines the export volume of those producers and hence, largely, their export revenues. For the consumers, such fluctuations emphasize their need for imports, the cost involved in such imports, and the opportunity cost of substituting those imports with domestic energy sources. Neither party can plan with confidence for long-term energy production, investment and consumption; nor can they allocate and mix resources in such a way as to achieve economic objectives with optimum efficiency. It is clear, therefore, that what the oil industry badly needs is price stability in the long term.

But before introducing any propositions in this regard, I consider it important to recall the events of the past 26 years, with a view to throwing some light on the evolution of world crude oil prices and their structure. In the 20 years from 1950 to 1970, mainstream crude oil prices in the Arabian Gulf were fixed by the oil companies at a level that ranged between $1.75 to $1.95 per barrel. This level was raised for a while in 1957 to about $2.00 in the wake of the Suez Canal closure which followed the invasion of Egypt by France, the UK and Israel. However, that price level was reduced to $1.90 in February 1959, being followed by another reduction in

August 1960 which restored prices almost to the level which existed in 1951-52. Despite the Saudi Government's protest at such reductions, the oil companies continued to price oil on their own. At the same time, world demand (outside CPEs) increased from 18.6 million barrels per day in 1960 to 39 million barrels per day in 1970, showing an annual rate of growth of 7.7%. OPEC production during the same period grew from 8.7 million barrels per day to 23.4 million barrels per day, showing a growth rate of 10.5% per annum. OPEC's efforts to raise oil prices were futile as the oil companies - backed up by legal clauses in concession agreements that gave them the sole right of pricing - were unwilling to yield. Their argument was always the same, namely, that product prices in the market do not permit a net-back value, FOB ports of export, greater than $1.80 per barrel. Capitulating to OPEC's demand would, allegedly, have entailed additional payments from their respective shares in revenues after income taxes, which were said to have fallen to intolerable levels. In May 1970, however, a certain event occurred which nullified such contention. During that month the crude pipeline stretching from Saudi Arabia to Sidon in Lebanon was accidentally damaged. The oil flow, running at that time, at a rate of 470,000 barrels per day, was suspended until January 29, 1971. On January 30, oil flow was resumed, but at a level of only 382,000 barrels per day. During the period of supply disruption from the pipeline, product prices in world markets firmed up considerably. Toward the end of June 1970, two months after the pipeline was shut down, gasoline prices in Rotterdam increased by $3 per ton. That increase was followed by another rise of $8 per ton in August. Similarly, jet kerosene prices rose by $8 per ton and those of diesel gas oil went up by $8.75 per ton. Fuel oil price increases outpaced all others in rising by $11 per ton by August. All these higher prices were sustained until the end of December 1970 and beyond. In per-barrel terms the increases averaged $1.25, which is about 40% higher than CIF prices of Middle East crudes in West Europe. Oil companies, however, decided to increase East Mediterranean prices by 20 cents, or 9.2%, only as the oil flow was resumed in the Tapline in late January. These price increases demonstrated that demand and supply forces could tolerate an initial price increase in the market of 40% to 50% without necessarily jeopardizing the competitive position of oil or its consumption growth. As a result, producing countries began consulting with each other regarding this new situation. Their consultations finally crystallized in certain demands which were agreed upon among themselves during the 21st meeting of the OPEC conference held in Caracas in December 1970. These demands were as follows:

1. To seek a rise in income taxes on oil company profits up to 55%.

2. To establish a uniform general increase in the posted or tax reference price in all Member Countries to reflect general improvement in the condition of international petroleum markets.

3. To eliminate completely the allowances granted to oil companies as from the beginning of 1971.

Ladies and Gentlemen,

That Conference was a turning point in the history of oil pricing. It paved the way for the ensuing negotiations with the oil companies, in Teheran during February 1971, which culminated in the renowned Teheran Agreement. Under the Agreement, producing countries and oil companies jointly decided to raise prices by 38 cents per barrel and to accept an increase in income tax rate to 55%, and to supply an annual increase in the price of 2.5%, in addition to 5 cents per barrel as a lump sum to be added annually until 1975.

Negotiations aimed at adjusting the Teheran Agreement were resumed with the oil companies. Two agreements were signed in Geneva for the upward adjustment of oil prices on account of the devaluation of the US dollar. However, negotiations conducted in September 1973 for a second round of upward adjustment in the price, this time on account of demand growth and galloping world inflation, failed. Consequently, OPEC Member Countries decided to go it alone and announced on October 18 of that year an immediate increase in posted prices to $5.12 per barrel for Arabian Light crude, which represented a rise of 70% relative to the then prevailing prices. That measure signified the entry of producing countries to the world markets for the first time as the sole determinants of oil prices, thus reversing positions with the oil companies who had monopolized that role in the period prior to 1971. From that date onwards, it was OPEC Member Countries who set the price level for their crudes and, since other crude prices had traditionally followed the OPEC price. OPEC thus began to set the international prices of crude oil, as well. In January 1974, the posted price was increased to $11.51 per barrel which predicated a market price of $10.84 per barrel on the basis of 93% ratio of market to posted price. By the end of 1978 crude oil market prices had moved up a little to reach $12.70 per barrel. The big rise came in June 1979 when the price of Arabian Light reached $18 per barrel. In November of that year, it reached $24 per barrel and continued to increase thereafter until it peaked at $34 per barrel in October 1981. In March 1983, OPEC met in London and decided to reduce the price to $29 per barrel. The Organization again adjusted that price downward, by $1, in January 1985 in a move to modify price differentials. In December 1985 OPEC decided to secure a fair share for its output and exports in a bid to increase its production. As a result, OPEC abandoned its price structure and adopted a market-oriented price system.

In fact, that decision marked the first time since 1973 that OPEC had ceased to be the price setter of international oil prices. The market took over that role and prices declined from about $22 per barrel in January 1986 to $9 per barrel in July.

OPEC had unilaterally assumed control over crude oil pricing in order to rectify the anomaly of underpricing adopted by the oil companies during the 1960s. It is quite obvious that a price of $1.80 per barrel -- a price which remained static for 10 years -- certainly did not reflect the supply/demand relationship during that period. As I mentioned earlier, world demand increased at an annual rate of 7.7% in the period 1960-1970, from a level of 18.6 million barrels per day to a level of 39 million barrels per day. At the same time, OPEC supplies increased at a higher rate of 10.7% annually as other non-OPEC supplies retreated in volume. Cumulative production of OPEC during that period reached close to 60 million barrels. Such depletion of OPEC reserves had the effect of reducing the reserves-to-production ratio in OPEC countries from 88.8 in 1960 to 47.1 in 1970, despite the growth of their reserves from 218.2 billion in 1960 to 407 billion by the end of 1970. If such depletion rates had continued, the reserves to production ratio would have reached a critical level of 38 in 1977. The price increases which took place in the aftermath of the Teheran Agreement were not sufficiently high as to check the growth of demand in the world market. In August 1973, the price of Arabian Light reached a level of $3.14 per barrel, which was 74.4% higher than the pre-Teheran price. Demand in 1973, however, reached 47.4 million barrels per day, which was 21.5% higher than that of 1970. In January 1974, prices were raised to a level of $11.65 per barrel. Subsequently, during 1974 and 1975, demand somewhat declined. It resumed its traditional growth path in 1976 through 1979, but at a much slower pace. In 1979 it peaked at an all-time high of 50.9 million barrels per day, which reflected a rise of only 9.5% over the 1973 level. Thus it grew, in a period of 6 years, at a rate equivalent to that of only one year's growth in the 1960s. The underlying growth rate over the period 1973-79 amounted to only 1.3% per annum, a pronounced slowdown from the more than 7% average rate which had prevailed in the period 1960-73. OPEC supplies suffered similar stagnation over the same period. In 1973, they amounted to 31 million barrels per day -- virtually the same level they attained in 1979. In the years between 1973 and 1979, namely 1974 thru 1978, OPEC supplies have varied between a low of 27.7 million barrels per day in 1975 and a high of 31.2 million barrels per day in 1977, close to the levels reached in 1973 and 1979 on the average. In other words, OPEC supplies in the entire period 1973-79 stagnated. Total world supplies during that period had exceeded demand by a small margin of only abut 7%, indicating that a state of virtual equilibrium had been reached between supply and demand. Further evidence of that equilibrium is provided by the fact that the oil price, which was set at a level of $11.66 in early 1974, had grown only slightly, to a level of $14.55 per barrel, by May 1979. This balanced supply/demand situation at prevailing prices signaled the fact that additional price increases of sizeable magnitude would disturb the balance by generating a decline in consumption coupled with an oversupply situation. But such a perception was, ironically, denied OPEC in 1979, being concealed by the concurrent rise in demand by oil companies for stockpiling and by consuming countries, apprehensive about their supply security due to the sharp decline in Iranian production by about 3.7 million barrels per day (from 5.2 million barrels per day in 1978 to 1.5 million barrels per day in 1981). Hence, the scrambling for immediate purchases of crude at rising prices. This drive had the effect of raising demand for OPEC oil in 1979 to close to 31 million barrels per day. But even in normal circumstances, even if that stockpiling drive had not taken place, demand for OPEC oil might still have reached about 29 million barrels per day. But the steep rise served to create a dangerously false impression -- namely, that, however high the price, there would still be a number of buyers willing to pay it.

Prices in the spot market soared astronomically, exceeding the $40 per barrel mark. In this situation, it naturally seemed to OPEC that to ask $34 per barrel for its crude exports was not unreasonable. But when OPEC supplies started to decline sharply in 1981 and 1982, as a result of the fall in demand and the rise in non-OPEC supplies, we recognized too late that oil was overpriced, that it had reached an unwarrantably high level, destroying the state of equilibrium between supply and demand that had prevailed for so long. However, Saudi Arabia, which in the past had used it production as a tool for restricting the trend toward exorbitant prices, now reversed its position by reducing production in order to support the world price structure. It was felt that, from the standpoint of revenues in the short term, it would be economically logical for OPEC to place a ceiling on its production and, by so doing, to consolidate the price level -- first, at $34 per barrel in 1982, and then at $29 and $28 per barrel in 1981 and 1985 respectively. By the end of 1985, however, the hopes previously harboured by OPEC Member Countries of reversing the downward trend in their production share in a steadily declining oil market, had faded away. Demand for OPEC oil continued its inexorable decline, stagnating at a level of 11% below its previous peak, whereas non-OPEC supplies increased by about 5.7 million barrels per day from their 1979 level.

Ladies and Gentlemen,

Since, 1981, OPEC has been calling for a modus operandi with non-OPEC exporters. With the exception of Mexico, these pleas have fallen on deaf ears. The share of OPEC production in total world supplies in 1985 declined to an unacceptable level of 15.55 million barrels per day. It became clear that OPEC, with such a low level of production, could no longer continue to bear the whole weight of supporting the price structure: it simply lacked the power to do so. Neither could Saudi Arabia, whose production level reached about 2 million barrels per day in July 1985, adhere any longer to the fixed price system if it was to realize the revenues needed for its budget, to feed its population and to finance its economic development. As a result, OPEC decided during its meeting in December 1985, to secure and defend for itself a fair share in the world oil market. This was achieved with remarkable success. During the first seven months of 1986 the combined production of its Members exceeded 17.5 million barrels per day, reflecting a rise of 12.5% from their level in 1985. Thus OPEC had for the first time since 1981 been able to reverse the declining trend of its production. However, the market prices of OPEC crudes had concomitantly deteriorated, reaching about $9 per barrel in July this year, which was lower than that of 1974 in money terms and pronouncedly lower in real terms.

The sharp decline in world crude oil prices, which commenced in 1986, has had varying degrees of impact on the countries of the world. Oil producers, whether inside or outside OPEC, have lost huge amounts in oil revenues. Should the price average reach about $14 during the whole of 1986, OPEC Countries' net government revenues may amount to $65.3 billion from an export level of 14.9 million barrels per day. Should the price average reach $15 per barrel, those revenues may climb to $70.7 billion. Revenues under the first case may, therefore, represent a decline of 44.3% from that earned in 1985. The second case may show a decline of 41.9%. The decline in OPEC revenues did not, in fact, commence in 1986, but long before it. The export earnings of OPEC peaked at $282.3 billion in 1980. In 1981 they commenced their decline, moderately at first but precipitately in 1983 when they reached $161.5 billion. They continued their decline thereafter until, in 1985, they reached $131.5 billion. Up to 1985 the reason for the decline was attributable mainly to the sharp fall in their export volumes and, to a slight extent, on account of the price decline. Export volumes of OPEC crudes in 1980 reached 24.86 million barrels per day. They declined to 13.35 million barrels per day in 1985 representing a fall of 44.3%. The weighted average price of those exports in 1980 amounted to $31.03 per barrel, whereas that of 1985 declined to $26.99 per barrel, reflecting a fall of only 13%.

Non-OPEC countries may suffer similar declines. Egypt, for instance, may experience a decline of about 58%, while the UK reportedly may lose about $8 billion in government revenues. Consuming countries, on the other hand, may enjoy a great deal of savings in their import bills. For instance, it is estimated that the United States oil imports value in 1986 may amount to $28.9 billion at an average CIF price of $16 per barrel ($__ of which constitutes freight element) and a net import expenditure from 1985 of 33%, and a drop of 57% compared with 1980. West Europe (excluding the UK and Norway) is expected to spend about $57 billion on oil imports during 1986, at an average price of $15 per barrel, which reflects a saving of $45 billion from the value defrayed in 1985. The cost of imports in the Far East, including Japan, in 1985, reached about $53 billion. That figure is based on a net import value of 5.3 million barrels per day and an average CIF price of $27.4 per barrel. In 1986 it is estimated that those imports, at an average CIF price of $15, may fall to $29 billion reflecting a decline of 45.3%.

These savings will certainly have a positive effect on the balance of payments of industrialized countries in 1986. If the trend to low prices continues for a few years, it would have a sustained positive effect on GDP, inflation and employment.

However, a negative impact on the economics of the countries may be indirectly engendered by the slump in their exports to OPEC Countries used to provide an expanding market for manufactured goods and other commodities of those countries. As the revenues of OPEC Countries started to decline, however, especially in the years 1983-1985, their demand for imports, too, went down. For example, during 1979, OPEC Countries imported close to $77.1 billion worth of merchandise from the industrialized countries of the OECD. In 1981 and 1982 that value peaked at $118 to $115 billion. Thereafter, it started to decline until, in 1985, it reached about $72.3 in 1985, a shade below that of 1979. It is estimated that in 1986 the aggregate value of these imports may reach about $55 billion, reflecting a decline of 53% from the peak reached in 1981. These values relate to merchandise only. However, the services sector in OPEC Countries has also experienced similar trends. It is estimated that the value of contracted services between seven major countries, namely, USA, UK, France, West Germany, Italy, Japan and Korea with OPEC Countries reached $29.9 billion in 1980. In 1985, however, that value declined by 44.2%, amounting to only $16.1 billion.

Ladies and Gentlemen,

OPEC charged high prices for its crudes during the 1979-81 period for the reasons already explained. These high prices were sustained for four more years until the end of 1985. The outcome of such a high price level was that it created an imbalance between supply and demand which worked to the disadvantage of OPEC in the intermediate term. Non-OPEC supplies, be they oil, coal, gas or nuclear, have been stimulated to an extent which made it possible for them to capture a sizeable share of OPEC oil exports. OPEC, in order to arrest the declining trend in oil prices which permeated the market as a result, resorted to measures of supply control involving the reduction of its production, at first voluntarily during 1980-81, and later, on a mandatory basis in the 1982-85 period in a bid to stabilize the market. Its efforts succeeded in maintaining supply/demand equilibrium in the short-term only. OPEC could not maintain such an equilibrium in the intermediate or the long term. The oil price had finally been freed from such controls in order to seek its level of equilibrium under the free interplay of supply and demand. Such level seems to be hovering around $14-16 per barrel for 1986 on the average. Demand is expected to grow gradually and slowly in the coming years. As it grows, it will approach the world production capacity that has more or less stagnated at a level of about 55 million barrels per day. Consequently, as the supply/demand gap narrows, prices will tend to firm up and also to increase. It is very important for the world oil industry to seek equilibrium in the long term if it is to achieve stability, a goal desired both by producers and consumers. In order to achieve stability, price setters should be able to interpret supply/demand factors in such a way as to determine the prices at levels that achieve long-term equilibrium. Failure to do so will create cyclical upheavals for exporters and importers in the 1990's similar to those experienced in the last 26 years. The time is now opportune for adopting policies aimed at avoiding the mistakes of the past. There were times of underpricing in the Sixties and times of over-pricing in the Eighties. The 1970's, contrary to belief, reflected in general a period of equilibrium and stability. If a period of 13 years is taken to represent the long-term, and assuming that this period begins in 1980 and ends in 1992, then it is foreseen that a price range that achieves equilibrium between supply and demand in world markets may, during this period, fall between the peak price of $34 per barrel in 1981 and the low of $14 per barrel which may prevail in 1986. Should the price climb in 1987 and the following years at a rate of $1 per annum so as to reach $20 per barrel in 1992, it is calculated that the price which may emerge on a weighted basis for the period 1980-92 will be about $23.8 per barrel. It is assumed that during this period world demand may grow at a rate of 1.5% per annum through 1992 so that by that year it would reach about 50.9 million barrels per day. At such level, world potential supply, which may stagnate more or less at about 55 million barrels per day, would exceed demand by only 8%. This situation would have the effect of narrowing down the prevailing supply/demand disequilibrium to manageable proportions. Thus looking at the problem from the standpoint of long-term equilibrium, it is assumed that if OPEC, in 1980, had charged a price of $23.8 per barrel, and had kept it frozen at the same level for the twelve-year period 1981-82, OPEC Countries would thereby earn an amount of revenue over the entire period equivalent to that actually earned in the period 1980-85 together with the amount supposedly to be earned over the period 1985-92 under an average price of $18 per barrel. It may be inferred from this that the average price of $18 per barrel, if applied in the intermediate term, will be the price which may reflect equilibrium in the intermediate term and makes it possible for equilibrium to be arrived at in the long term as well at a price of $23.8 per barrel. Under such a supply/demand price scenario, OPEC Countries' exports are foreseen to increase from 14.9 million barrels per day in 1986 to 20 million barrels per day in 1992. As a result, their revenue is expected to reach $146 billion in 1992, roughly the same as the amount they earned in 1984. It is further assumed that if the price charged by OPEC for the entire period 1980-82 remained at a level of $23.8, world demand would have moderated its fall perhaps by 50%. Instead of reaching the low level of 45 million barrels per day in the early 1980's, it could have declined modestly to about 48 to 49 million barrels per day from its peak of $1 million barrels per day in 1979. Furthermore, non-OPEC supplies, which were so strongly induced at a price range of $30-34 per barrel would, at a price of $23.8, have been maximized at a level 1-2 million barrels per day below the peak of 23 million barrels per day reached in 1985.

Under such assumptions it is calculated that world demand for OPEC supplies would have been stabilized at a level of about 20-22 million barrels per day for the entire period 1981-92 rather than have fluctuated between 26 million barrels per day in 1980 and 15.6 million barrels per day in 1985. As a result, OPEC's annual income would have been stabilized at about $153 billion rather than have fluctuated between a high of $282 billion in 1980 and a low of $76 billion in 1986 (see table). Under both scenarios, therefore, from the revenue standpoint, OPEC would end up, in the long term, with the same situation. However, OPEC was overwhelmed by the market fluctuations, this resulting in the situation with which we are confronted today. If the market is to be stabilized in the long term, OPEC and non-OPEC producers should cooperate in aiming at the establishment of a price structure which takes into account the economics of equilibrium between supply and demand. Producers as well as consumers should adopt policies that shun drastic interference in the market forces which may disturb the much sought for long-term stability. It is only through the achievement of long-term free market equilibrium that stability can be attained.

Thank you for your kind attention.

YEAR	OPEC EXPORTS		TOTAL VALUE OF OPEC EXPORTS	AVERAGE PRICE
	ooo b/d	million bbl/yr	Million $	$/bbl
Actuals				
1980	24,862.5	9,099.7	282,341	31.028
1981	20,458.1	7,431.0	261,167	35.146
1982	16,466.3	6,010.0	206,205	34.310
1983	14,742.9	5,381.0	161,479	30.009
1984	14,339.7	5,248.0	146,019	27.824
1985	13,350.6	4,873.0	131,513	26.988
Estimated				
1986	14,900.0	5,439.0	76,140	14.000
1987	16,000.0	5,840.0	87,600	15.000
1988	17,000.0	6,205.0	105,485	17.000
1989	18,000.0	6,570.0	111,690	17.000
1990	19,000.0	6,935.0	131,765	19.000
1991	19,500.0	7,117.5	135,233	19.000
1992	20,000.0	7,300.0	146,000	20.000
TOTAL	17,564.0	83,339.2	1,982,637	$23.789/bbl
Six year average 1980-1985	17,371.1	38.042.7	1,108,724	$31,182/bbl
Seven year average 1986-1992	17,720.0	45,296.5	793,913	$17.5/bbl
Annual average	17,600.0	6,411.0	153,000	$23.789/bbl

PMAA
PETROLEUM MARKETERS ASSOCIATION OF AMERICA
1120 VERMONT AVE., NW • SUITE 1130 • WASHINGTON, DC 20005 • (202) 331-1198

October 2, 1986

The Honorable James A. McClure
Chairman, Committee on Energy
and Natural Resources
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

Attached is a copy of the Petroleum Marketers Association of America's comments on the September 18, 1986 hearing regarding the domestic and international petroleum situation.

Sincerely,

Phillip R. Chisholm
Executive Vice President

PRC/tdm

enc.

Formerly National Oil Jobbers Council

PETROLEUM
MARKETERS
ASSOCIATION OF
AMERICA

Statement of

PETROLEUM MARKETERS ASSOCIATION OF AMERICA

Before the

ENERGY AND NATURAL RESOURCES COMMITTEE
UNITED STATES SENATE

On

THE DOMESTIC AND INTERNATIONAL
PETROLEUM SITUATION

SEPTEMBER 18, 1986
WASHINGTON, DC

1120 VERMONT AVENUE, NW ▪ SUITE 1130 ▪ WASHINGTON, DC 20005 ▪ (202) 331-1198

The Petroleum Marketers Association of America (PMAA) is the national organization representing the nation's independent petroleum marketers. PMAA is a federation of state and regional trade associations from the 48 continental states and the District of Columbia.

PMAA member associations represent some 11,000 independent petroleum marketers, including gasoline and diesel fuel wholesalers, commissioned distributors of gasoline, gasoline reseller-retailers and thousands of retail fuel oil dealers, as well as independent marketers serving the industry by storing and supplying petroleum products. Collectively those marketers account for nearly 50 percent of the gasoline and 75 percent of the home heating oil sold in the United States. They sell their product under either their own private brand or the trademark of their supplier.

PMAA's gasoline marketers are also heavily involved in combination gasoline/convenience store operations. PMAA marketer-members own over 14,000 convenience stores.

PMAA's heating oil marketers are also involved in diversified operations, including the sales and servicing of heating oil equipment. Additionally, many heating oil dealers have become involved in the sales and servicing of combination solar/oil heat systems.

The majority of PMAA marketers are small businessmen, serving homes, farms, businesses and industry. When Small Business Administration guidelines are applied to the PMAA membership, the majority of marketers fall within SBA jurisdiction. PMAA thus represents the small business segment of the petroleum marketing industry. Our member companies employ approximately 250,000 people nationwide.

Oil is an exhaustible resource and America has a fixed resource base. One day, whether due to economic or geological constraints, American oil wells will stop pumping. Of this, there can be no doubt. All that any one can do is to either push that date further into the future by using less of our oil now or we can hasten the day by speeding up the process of using our own oil.

The latter method, the so-called "drain America first" policy was espoused by the Eisenhower Administration and relies on an oil import tax or quota. This policy maybe acceptable if one expects or foresees the threat to energy security as occurring during those periods of peak domestic production. On the other hand, what if the threat occurs many years after the drain America policy has begun, when domestic oil production and reserves are dwindling? We are not free to choose the date of a disruption or threat, and therefore we must pursue the goal of energy security accordingly.

Hardly a session of Congress has passed since the 1973-74 oil supply disruption that some concerned American somewhere hasn't warned that our energy security is being threatened. For all the many debates, there is still a great deal of confusion about just what constitutes energy security, what enhances or threatens it and whether it is compatible with other national priorities.

Recently, we were told by some domestic refiners that the flood of "cheap" refined products from Persian Gulf countries was forcing the closure of numerous domestic refineries and threatening energy security. Now that crude oil prices have fallen faster than refined product prices and refinery profits are at a high, they no longer see the threat. Other refiners, such as Mobil Oil, saw no such threat.

Shortly after the 1973-74 oil embargo, some groups saw the rapid rise in oil prices and our dependence upon Arab OPEC oil as the threat to energy security. Others viewed any reliance upon imported crude oil as the threat. Today, many of those groups which thought a free market approach to energy matters was good now believe that a free market threatens their livelihood, which they equate to national energy security.

As you can see, there is no concise definition of just what energy security is. To some, it means falling oil prices. To others, it means rising oil prices.

We submit that energy security can be defined as: (1) adequate supplies of energy to ensure military preparedness and defense; and (2) the protection of the economy from rapid fluctuation of oil prices and associated macroeconomic disturbances. Policy makers should be concerned about energy security because of the impact of energy on a modern industrial economy. As energy moves, so does the national economy. Therefore, energy security is necessary to ensure economic security and consequently, national security.

The questions that face us today are: (1) Do imports of petroleum make us more vulnerable to an oil supply disruption? (2) Is there a trade off against the risk of a disruption and the economic advantages associated with importing oil? (3) What are the ramifications of an oil import fee or tax? (4) What avenues are open to the government to promote energy security without endangering economic security?

(5) What is the price of energy independence and would this keep the economy from being vulnerable to oil supply disruption?

Although America is not now energy independent, we could be. We don't have to import any energy. We could produce it all at home. The government could place an embargo against the importation of crude oil much like it has done against products from Cuba. To be effective, the embargo would have to extend to imports of refined products. The supply of oil and refined products would decline in the face of a given demand, and the price of domestic oil would rapidly increase.

As a direct result of the ban on imported petroleum, consumers and business would pay higher prices for petroleum, and this higher cost would translate into reduced income and output. The rapid increase in the price of oil would increase the demand for other fuels and petroleum substitutes, thereby raising their prices. As prices rose, the real purchasing power of the consumers income would fall and so would demand. Consumers and business alike would substitute away from American goods produced with higher priced energy towards cheaper foreign goods produced without the higher energy costs. Incomes of American companies would fall and, as a result, so would output and employment. In short, the ban would lower our standard of living, shift wealth to American oil producers, lower employment and increase the balance of payments deficit.

Now with America not importing oil or petroleum products, lets look at the impact of an oil supply disruption. Assume that there is a shortfall of oil output because of the Irani-Iraqi war. World oil prices would begin to rise and when they rose above the levels of U.S. oil and refined product prices, American oil companies would find it advantageous to export refined products to the higher priced world markets. As they did this, domestic supply would fall and American consumers would bid the price of domestic refined product prices higher until they came into line with world prices.

The lack of dependence on imports would not keep us from being vulnerable to the problems of an oil supply disruption. As long as we operate in a world economy, the price of domestic products would rise to meet world prices. America could be energy independent. But that is not the answer.

Does limiting imports or raising the price of imports reduce our vulnerability to an oil supply disruption?

An oil fee or quota has the same result as an embargo against imports. It shifts the supply curve for oil and raises the price. So we must ask, do higher prices of oil reduce our vulnerability? The answer is yes, higher oil prices do reduce our vulnerability. First, higher oil prices encourage the development and consumption of non-petroleum energy. Second, higher prices reduce consumption. The smaller a position that oil occupies in the economy, then obviously the smaller the impact of given increase in the price of oil will be.

Is there a trade off against the risk of disruption and the economic advantages of oil imports and, if so, does the reduction in risk outweigh the economic costs of an oil import fee?

As mentioned above, as long as we trade in world markets, we will always be vulnerable to the economic consequences of an oil supply disruption. However, we can reduce the potential impact of a given disruption. An import fee or quota is just one method of doing this. There is a cost to the economy of artificially raising the price of oil through a fee or quota. This cost comes through a reduction in the supply of oil and shows up in the loss of jobs, lower income and greater volume of non-oil imports that American consumers purchase.

If this were a perfect world, one could calculate the costs associated with decreasing imports to any specific level. Further, one would know the date of the future disruption and the economic impact that such a disruption would have on the economy. It would be a simple matter to compare the costs of a disruption against the costs of the import fee and choose the course that has the lowest net present value of discounted costs.

But alas, this is not a perfect world and no one knows the time, the date, or the magnitude of future oil supply disruption. We do not even know if one will come. Further complicating the matter is that world oil prices depend to a large degree on the behavior of OPEC and no economist has yet done a successful job. We might further add that it is difficult for a layman to place much stock in the predictions of many economists. After all, as late as the early 1980's, they were predicting oil to be $75 or $90 a barrel by the end of the decade. Some of them were extolling the virtue of lower oil prices and the evil of higher oil prices. They did not count on the impact of substitution, of technology, or of higher prices in the demand and supply of oil. It is difficult to believe those same economists now, when they predict the collapse of Western civilization from lower oil prices.

What is known is that the demand for oil is not very price sensitive. That is the reason why, with prices falling 63 percent since 1981, that demand has only increased 4.8 percent. An oil import fee will not, therefore, drastically reduce our consumption of oil. Additionally, past a given point, the increase in prices must be very large to draw forth additional supplies of domestic crude oil. Since January of 1986, the price of oil has fallen 49 percent and domestic production has declined only 4.7 percent. Furthermore, the price path of oil in the foreseeable future, even if prices had not fallen, would not have been sufficient to call forth quantities to replace imports. The best that could be hoped for is to replace the amount of domestic oil that is used each year. The more of our oil used today, the less there will be available for future use.

An import fee sufficiently large enough to reduce imports and spur domestic production, would be far above $13.00 a barrel (The approximate fee necessary to return us to pre 1986 prices assuming that all of the fee was passed along to American consumers). If OPEC absorbed a portion of the fee then the price would need to be that much higher. That would cost at least $22 billion dollars directly for just the higher price of imports. Based upon our heuristic estimates, the costs associated with an oil import fee far outweigh the benefit that they might concur on the economy.

There are some often overlooked benefits from oil imports and the lower oil prices that we now enjoy. Since peaking in 1981 at an average of $35.24 per barrel, crude oil prices have fallen to around $13.00 per barrel, a decline of 63 percent. If the average 1986 price for petroleum and petroleum products is approximately $15.00 per barrel, Americans will save $22 billion dollars if they purchase the same quantity as in 1985. Lower oil prices reduce cost of production and increase the purchasing power of consumers' income. Demand for non-petroleum products increases and employment rises. Additionally this large fall in the price of oil has not substantially increased the amount of oil that we use.

As a direct result of the oil price decline, Americans have $22 billion more to spend on non-petroleum goods and services. More jobs are created. Demand grows and the economy is further stimulated. The savings to do not stop here, because when oil prices fall other energy prices fall as well. That again means lower costs to business and higher income to consumers. With lower costs, business increases output and employment. With higher incomes, consumers increase demand. The economy is further stimulated.

In addition to providing the stimulus for economic growth, lower oil prices have reduced our import bill. Lower oil prices increase the quantity of goods and services or GNP. Imports of energy allow American manufacturers to compete here at home against imports and abroad against foreign firms. In short, imports of energy create a greater standard of living for Americans than we would have in their absence. It is clearly in our best economic interest to import energy, and we do so to promote economic security.

Complete energy independence is, of course, an extremist position and many people are not supporting complete independence as the answer. Yet, they do perceive that low domestic oil prices caused by the falling price of imports is threatening energy security. Why is this so? Some believe that it will cause us to consume more oil in the short run and to replace our energy-efficient capital stock with energy-intensive machinery, thus increasing long run oil consumption. We will return to those days of the early 1970s and OPEC sensing our vulnerability will seize the opportunity to drastically raise prices. We will once again be in an era of rapid inflation and unemployment.

Others note that low prices discourage investment, exploration, and production. They contend that America is vulnerable now because lower prices reduce domestic oil supply relative to imports. Then, soon, OPEC will hold us hostage.

The proponents of an oil import fee to ensure energy security have their basis in two principal arguments. Some argue, from the demand side, that lower prices encourage excessive consumption. Furthermore, low prices will lead American business and consumers to scrap their energy efficient machinery and methods and return to "wasteful" energy use. When demand has risen sufficiently high relative to OPEC's supply, they will work their magic and prices will once again rise bringing inflation and unemployment.

Others argue from the supply side that lower prices discourage domestic exploration and production, thus reducing domestic supply relative to imports. They argue that this would encourage OPEC to raise prices and we would find ourselves in the same position as the 1970s.

We would like to answer both of these charges. First, it is true that a fall in the price of oil does boost consumption. However, the demand for oil is not very price sensitive. Since prices began their precipitous decline in 1986, the price of crude oil has fallen from an average of $25.64 per barrel to around $13.00 per barrel, a 49 percent decline. Demand for petroleum and petroleum products, on the other hand, have increased only 4.8 percent, from 15.9 million barrels per day to approximately 16.2 million barrels per day. This is actually a high side estimate because a large portion of the increase has actually gone into stocks, not to satisfy consumption.

Assuming that foreign oil producers and importers do not absorb any of the tax, the price to American consumers would increase by a full $10.00. Domestic oil prices would increase similarly. That should put prices slightly below the levels of January 1986 ($25.64), when demand for imports was 4.5 million barrels per day. This could lead to a reduction of approximately 1.2 million barrels per day of imports at the most. The true impact on consumption of imports is likely to be substantially less. It is unrealistic to assume that foreign producers will be able to shift the entire amount of the tax forward to American consumers. Rather, they may be able to shift only 50%, in which case, imports of petroleum would decline by less than 1.2 million barrels per day.

Second, business capital investment decisions are based upon long term trends, not short term. Most people expect that the price of oil will rise again. We are not the only people who believe that prices will again rise. Business, too, understands. GM, Ford or Chrysler have not retooled to build larger, heavier automobiles with gas guzzling engines. Homeowners are not ripping insulation out of their homes. Carpoolers haven't stopped carpooling. Businesses are not purchasing energy inefficient equipment. Therefore, any increase in demand that occurred as the price fell, will easily and painlessly diminish as price increases.

Rather than serving OPEC or endangering our security, the fall in oil prices, even though only short term, does raise the real income or purchasing power of American consumers. It also drastically reduced the flow of American wealth or foreign claims on U.S. GNP out of the country. So, we believe from the demand side that we have nothing to fear, and everything to gain from this temporary decline in oil prices.

On the supply side, it is very true that lower prices have discouraged short term investment in exploration and production. But let us not forget that business investment decisions are made not on short term price movements but rather on long term trends. Most of the nation's energy experts acknowledge that in the long run, the price of oil will again rise. To be sure, numerous oil companies have and will file for bankruptcy and oil wells will be shut in. We must not accept this at face value. Rather, we must ask why are these companies any different from those companies that are actively purchasing oil reserves and continuing operations.

In 1984, the Department of Energy's FRS oil companies accounted for 55% of the nation's crude oil and natural gas liquids production and 59% of the reserves. The average cost of producing from their wells was $7.04 per barrel before income taxes and the cost of finding oil was $9.13 per barrel before taxes. These costs are well below the 1985 average selling price of a barrel of domestic crude oil ($24.08). Additionally, the price indices for drilling and oil field equipment and services have been steadily declining.

The cartel structure of OPEC has allowed them to raise the price of oil above the level associated with a freely functioning efficient market. In layman's terms, they have raised the price well above the long run supply costs. The hallmark of our economic system is that freely functioning markets drive price to be equal to long run economic costs. In this manner, the most efficient allocation of our nation's wealth and resources is achieved. What it produces is an economic survival of the fittest and only the efficient survive.

America is the only country to place so much significance on rig counts as a measure of exploration. The number of active rigs is a function of numerous items, such as tax treatment of dry holes and drilling costs. It says nothing about the addition of crude oil to the reserve base. A more appropriate measure would be additions to reserves.

Some would argue that this decline in drilling activity bears a direct relationship to a decline in reserves. And that the decline in reserves and production is what makes us vulnerable to an energy supply disruption or rapid price increase.

Our reason for making mention of the costs of exploration and production and the role of our economic system is that beginning in 1973 the actions of OPEC significantly subsidized U.S. producers. These large "abnormal" profits encouraged numerous new entrants in the domestic exploration and production business, and it encouraged the exploration and development of marginally profitable wells. It encouraged the number of active rigs. Yet, these new entrants did little to add to domestic reserves but drastically increased the costs for other well established companies.

Reference to the DOE statistics proves this point. In 1984 42.4 percent of the FRS companies' exploratory wells were successful compared to 22.7 percent for the rest of the industry. Additionally, with only 23.8 percent of the nation's exploratory wells and 18 percent of the development wells, the FRS companies added 314,200 barrels of oil per well completed in 1984 compared 82,200 per well completed for the industry as a whole. Returning to our original statement, oil is an exhaustible resource and one day America will run out of oil for either economic or geological reasons. The more we use today, the less we will have available for tomorrow. Given the possibility of an oil supply disruption and the accompanying economic disturbances, there is an optimum path of domestic oil extraction which reduces the impact of a disruption on the country.

Assuming that the long run price of oil is growing, the slower the rate that America uses its own oil, the greater will be our protection from a future disruption. This stems from the fact that slower domestic production reduces the world supply and acts to drive price up, as prices increase investment in and use of non-petroleum energy becomes more attractive and the more oil in the ground, the more there will be available should a disruption occur.

The argument to encourage domestic production to ensure energy security simply doesn't hold water. It's more likely that we should encourage domestic exploration but not domestic production.

Now, we would like to turn to the specific response to energy security at hand -- an oil import fee, which is nothing more than a tax by any other name.

The imposition of this tax will raise imported crude oil prices. As refiners, petrochemical plants and other imported crude oil producers react to higher prices, they will begin to purchase cheaper domestic oil. Demand for imported crude oil will fall. Given the relative inelasticity of supply for domestic oil, this increase in demand can only result in higher prices for domestic oil. Users of crude oil, who can use some other form of energy input will begin to do so and this will begin to increase the prices of other forms of energy such as natural gas, coal and electricity. Those industries which must still consume large quantities of higher price crude oil will begin to pass the higher cost of production along to consumers, as they are able. This results in lower output and higher prices in industries which are heavily dependent upon petroleum such as refining, petrochemicals and manufacturing. The net result to the economy is lower economic growth (GNP) than would have resulted without the tax.

To be sure, federal receipts from the import tax rise, and due to higher domestic crude oil prices, federal windfall profits tax collection increases. However, federal tax revenues from personal and corporate income taxes will fall due to the growth path of the economy, lower GNP, and higher rates of inflation, unemployment and interest. These factors also impact the rate and level of federal outlays. Federal outlays will increase as the government pays higher energy prices, increase social outlays which are pegged to the growth of the consumer price index. Of course, accompanying an increase in unemployment will be the federal outlays for unemployment insurance. In all, inflation, unemployment and slower economic growth exact a large cost on federal coffers.

There is an adverse economic impact on many other industries. The domestic petrochemical industry will be another hard hit business. Already under economic strains from cheaper foreign produced products, a crude oil import tax would severely impact their profitability and ability to compete both here and abroad. The rapid increases in petroleum price during the 1970s severely constrained output, employment and profitability in the manufacturing sector of the economy. These industries stand to gain the most from petroleum price stability or expected declines. If the nation is to continue on the path of economic prosperity then it must have a strong manufacturing sector. To think otherwise, will spell economic insecurity for this nation.

America must not pursue the goal of energy security blindly while sacrificing economic security. That is what an import fee would do.

The fact that an oil import fee does not promote energy or economic security does not detract from the fact that in order to ensure security we must have a healthy, efficient domestic oil industry. If our domestic industry is unable to deliver the crude oil that's in the ground, then no amount of domestic reserves will shield us from an oil supply disruption. It is a difficult line to walk - the line between helping the industry while hurting security (with an oil import fee or quota) and helping industry without endangering security. Only a proper understanding of the role of energy will help. Let me suggest the following methods to help with out hindering.

(1). Oil is a commodity just like iron ore or corn. It should be taxed no more or no less. Remove the prohibitive taxes at the state and federal levels that are placed on oil. This will increase the after tax return to domestic producers and encourage exploration and production.

(2). Repeal the Fuel Use Act.

(3). Use only domestic oil for the Strategic Petroleum Reserve with domestic oil.

(4). Decontrol wellhead natural gas prices. This would improve revenue available to producers of oil associated gas and encourage domestic activity.

(5). Abolish the Windfall Profits Tax.

(6). Waive state and federal regulations that lead to an early abandonment of marginal wells on state and federal lands.

(7). Reduce the paperwork burden for exploratory and development drilling.

(8). Keep CAFE standards in place.

(9). Repeal the Alcohol fuels Excise tax exemption.

(10). Continue to fund alternative energy research in such areas as oil shale, geothermal and solar energy.

Energy security is a goal to strive for only if, in doing so, we do not endanger our economic security or national security. Our domestic energy industry does need help, but an oil import fee or quota is not the answer because it sacrifices energy and economic security, and therefore, also hurts national security. The federal impediments to fuel use must be removed. All fuels must stand on their own merits and their prices and use must reflect the economic cost of their production. We must stop thinking of energy as a luxury to be taxed but rather as a vital element of the economy and of national security.